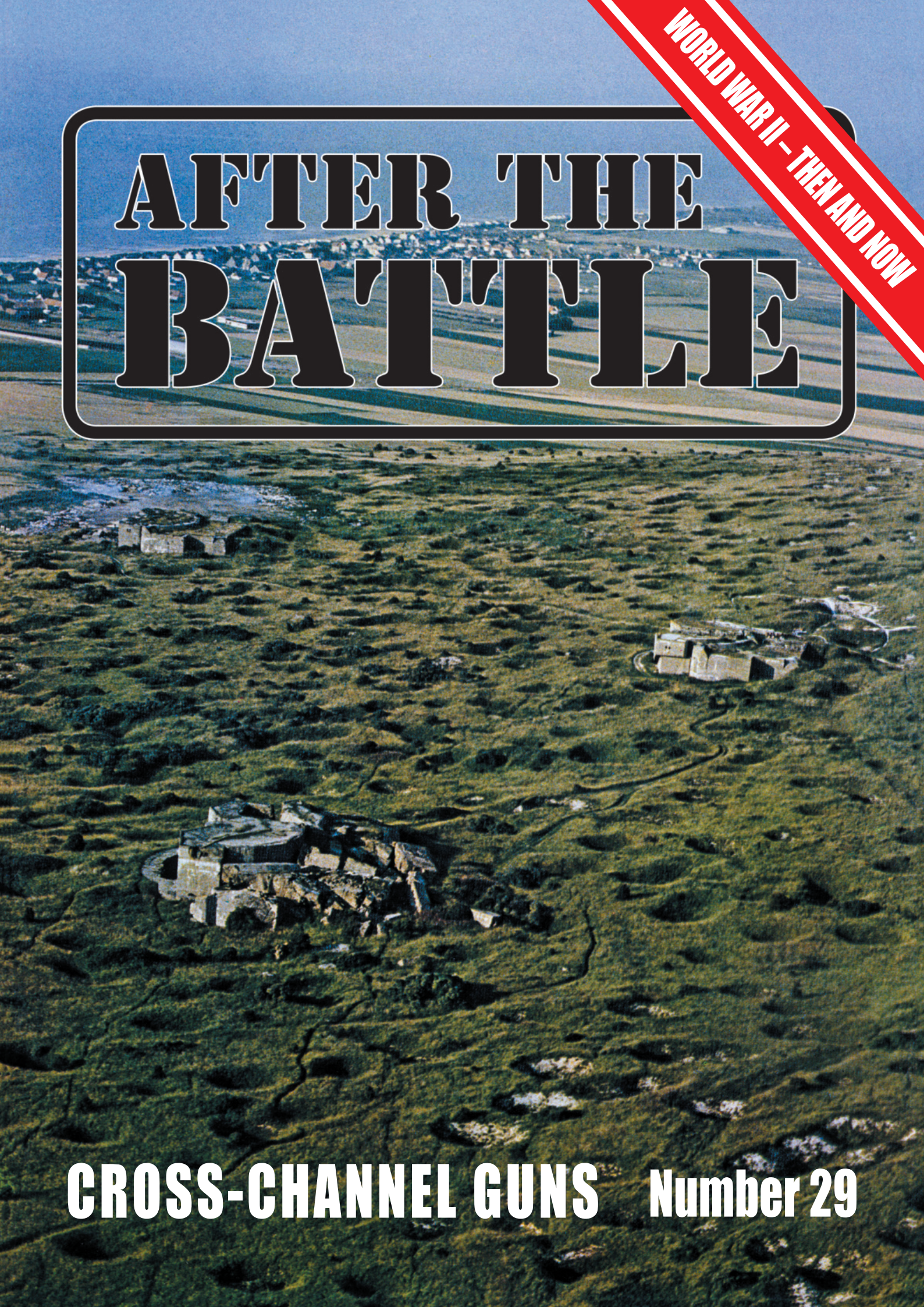
WORLD WAR II – THEN AND NOW
AFTER THE
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CROSS-CHANNEL GUNS
Number 29

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Front Cover: The shell and bomb-scarred Noires Mottes escarpment near Sangatte, site of Batterie Lindemann. Anton is in the background, Bruno in the centre with Caesar nearest the camera.

Centre Pages: Two men died in the accidental explosion which wrecked Turm III of Batterie Todt at Haringzelles.

Back Cover: Although rather insignificant when compared with the Pas de Calais gun casemates, the twin 15-inch Wanstone Battery near St. Margaret's-at-Cliffe can still be seen virtually intact.

Acknowledgements:
The editor is indebted to the Royal Engineers for being able to draw on the official Engineer Survey on the Heavy German Coastal Batteries in the Calais-Boulogne area for much of the detail and plans reproduced in this issue.
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Part One: The Kentish Heavies

'We must insist upon maintaining superior artillery positions on the Dover promontory, no matter what form of attack they are exposed to. We have to fight for command of the Straits by artillery, to destroy the enemy batteries, and fortify our own'. The turn of phrase is characteristically Churchillian. The time was August 1940, and the remarks were made in an urgent memorandum from the Premier to Lord Ismay and the Chiefs of Staff Committee.

The situation was a serious one. In the two months that had elapsed since they had overrun France and the Low Countries, the victorious German commanders had lost no time in establishing what they hoped would be a commanding position along the Channel coast. Control of the Channel was essential for 'Operation Seeloewe' — the proposed seaborne assault on south-east England — and nowhere was it more important than in the narrow 22-mile strait separating Dover from the French mainland at Cap Gris-Nez. Whilst arrangements were made for a score of 150mm and 170mm coastal guns to be positioned along the newly-won coastline, several batteries of rail-mounted 28cm Kanone 5 (E) with a 31-mile range and a massive 304-ton 21cm K12(E) railway gun, capable of throwing a 237lb shell seventy-odd miles were rushed to the area.

In Britain the search for additional coastal artillery had been in progress since the early summer. In pre-war years, Dover had been protected by two elderly 9.2-inch Mk X guns on short-range mountings at Citadel Battery, three 6-inch at St. Martin's Battery, two 6-inch Mk VII at Langdon Battery with twin 6-pdrs on both the Eastern Arm and the Breakwater, and a 12-pdr quick-firing on the Pier Extension. (Pier Turret Battery with 16-inch RML guns was activated in September 1940.) Clearly such weapons as these would be inadequate in the drastically-changed circumstances of mid-1940 and, with no more suitable batteries in place around the nation's coasts, one of Churchill's earliest acts as Prime Minister was to order a search to be made for extra fire-power. It was a subject on which he was well-qualified for he had been instrumental in saving several heavy guns from the hands of the breakers at the end of the First World War. Fortunately his concern had been shared by others in authority and, when the call went out for more guns, a surprising number of weapons were unearthed which had been removed from warships in response to the disarmament treaties of the inter-war years. Such guns had been greased, painted, blanked off and fidded and subjected to six-monthly inspections.

The guns required at Dover fell into three categories. Firstly there would have to be some of the long-range type that could bombard targets on the enemy-held shore. Secondly, there was a need for mobile super-heavies that could be used against shipping and artillery targets and, if need be, withdrawn to pound the invasion beaches and, lastly, there was an urgent requirement for intermediate range weapons, such as the old 9.2-inch gun mounted on modern 35-degree carriages, that could be used to deny enemy shipping free access to Channel waters.

At first Churchill had been hopeful that he might obtain two 16-inch guns from the United States (intended for installation on the North Foreland where they would have become Hope Battery) but shipping space precluded their ever being sent across and he was forced to look elsewhere for his long-range weapons. There were four guns available from the *King George V* and an early policy meeting asked for there to be two installations, each of one gun with one spare for each. The first gun was placed in a modified naval mounting while the second was installed in an 18-inch proof mounting that had once been used on HMS *Furious* and later the monitor HMS *Erebus*.

Above: **Winnie fires a 486lb test cordite charge. This super charge was the maximum permissible which would not exceed the authorised chamber pressure of the 14-inch barrel, four of which, originally destined for King George V class battleships, were allocated to the Royal Marine Seige Regiment. This charge would propell a 1,590lb shell a maximum distance of 28 miles. This photo was released by the Admiralty in 1944 (IWM).**

THE CROSS-CHANNEL GUNS

BY JOHN REED

The anti-invasion guns required in the second category were very much a mixed bag. A school of super heavy artillery had been established at Catterick Camp in Yorkshire in order to provide training in the specialised drills for handling the assortment of sometimes still-experimental, railway-mounted 9.2-inch guns and 12-inch howitzers that had somehow survived the years of indecision between the wars. The weapons themselves were, however, still in short supply. Churchill had hoped to persuade the armaments industry to produce an entirely new railway gun against an almost impossible time-scale but, here too, he had to settle for second best when it became apparent that it would be at least nine months before the first gun could enter service. Second best turned out to be a number of 13.5-inch armaments originally intended for the Iron Duke class of battleship, the first of which — His Majesty's Gun

Top: **Winnie was located in the valley to the west of St. Margaret's-at-Cliffe about half a mile from the B2058. Although it was a fixed installation on a turntable, railway line access was provided for installation of the gun, barrel-changing and ammunition transport (IWM).** *Above:* **Today, the railway line having been removed and the gun mounting and fire post blown out of the ground, the once-historic site is now just a quiet corner of Westcliffe Farm.**

Sceneshifter, a veteran of the Battle of Amiens twenty-two years previously — could be in action by mid-September. Meanwhile another veteran carriage, HMG Bochebuster, was undergoing refurbishing and a massive 18-inch howitzer was to be taken from Woolwich Arsenal to Darlington Railway Works for mating to its carriage and subsequent hand over to the Royal Artillery.

The first of the land guns was due for installation in early August, and Churchill was a frequent visitor to Dover in the weeks before its delivery, returning to his war-room to produce a stream of directives on how the new gun — inevitably known as Winnie — was to be deployed, camouflaged, and employed.

It was a far from adequate answer to the massed German artillery, already well dug-in and apparently well-protected against air attack. It was a contrast that was emphasised too when the first men of the newly-formed Royal Marine Siege Regiment arrived early in July at St. Margaret's Golf Course, which they were to prepare as a site for Winnie's emplacement, to find play still in progress on the fairways!

Building the heavy gun site was a major undertaking. Tons of concrete were needed to form solid firing platforms and two railway sidings were required at St. Margaret's. In

Above: **The Royal Marines with the biggest pull-through in the west! Because of the need to change barrels every fifty rounds or so (using 50-ton railway cranes brought specially to the site), the gun could not be provided with overhead protection as Churchill had wanted. The shielded barbette and camouflage netting on tubular steel scaffolding was its only protection (IWM).** *Bottom:* **Apart from a proliferation of weeds and a few lumps of concrete, nothing remains to mark its position.**

addition to the emplacements themselves, OPs, Command Posts, magazines and communications facilities had to be established in the battery area, and support facilities for the railway guns set up at Guston Tunnel and Pearsons Sidings. The Southern Railway company were also involved in strengthening all bridges on the stretch of line between Walmer and Lydden Tunnel in anticipation of the arrival of the first of the heavy rail guns.

Vickers eventually handed Winnie over to the Royal Marine gunners on August 7, 1940, five days before the first German shell to fall on British soil exploded at 11.00 a.m. on August 12 on Edgar Crescent, next to the old gas works at St. Radigunds, Dover, wrecking four houses. On that occasion, however, Winnie did not reply as Churchill had given strict instructions that his namesake was not to be committed to action until such time as the concentration of enemy artillery within its range provided a worthwhile target.

For ten days the Marines resumed their routine gun drill and local defence duties, deriving some satisfaction from their success with their anti-aircraft Lewis guns and 2-pdr pom-poms. However, shortly before 9.00 a.m. on August 22, the German guns were in action again, this time with the eastbound convoy 'Totem' as their target. At first the convoy commander thought that he was being bombed — no unusual occurrence around 'Hellfire Corner' — but when he realised that the lone aircraft in the vicinity could only be acting as a spotter for the shore batteries he signalled ashore for assistance. A Spitfire was promptly despatched to dispose of the spotter and when, after a delay of forty minutes, the Royal Air Force was able to get its own observation aircraft aloft to identify the offending batteries, it was decided that the time had come to call Winnie into action.

It was a far from auspicious debut. The one saving grace was that the three shells that the Marines fired fell within three hundred yards of the enemy guns. Such first time accuracy reflected great credit on the inexperienced crew but the gun's painfully slow rate of fire was an embarrassment and its effect, far from deterring the German gunners, merely persuaded them to switch their fire to Dover, where the remainder of the 100 shells that they fired during the action did widespread damage to civilian property.

In the weeks that followed, the Cap Gris-Nez batteries were often in action shelling Dover and the other towns on the Kentish coast. On one noteworthy occasion, they were joined by the K12(E) which were brought to bear on targets as far inland as Otham, a village not far from Maidstone, but it was the huge rail guns' only operational airing. Their great size made them difficult to conceal and especially vulnerable to air attack and it was no great surprise when they were quickly withdrawn from the front and replaced by more suitable weapons. In such circumstances, the British gunners could have been forgiven any envy that they might have felt for their German counterparts who had at their disposal a massive arsenal of assorted naval guns now considerably enhanced by the addition of those acquired from the nations that they had overrun. On one night, September 9, they were able to fire over 150 shells at Dover, to which Winnie, called into action for the second time, could only reply with four against the Framzelle battery.

By mid-September Winnie, operating under command of 12 Corps, the formation responsible for defending the south-east coast against invasion, had been in action on no fewer than six separate occasions, mostly against enemy guns in the area. Although on one day as many as twelve shells had been fired, Winnie was necessarily used with some discretion for fears of excessive barrel-wear had led to strict limitations on the big gun's use. With the threat of imminent invasion, the gunners were under orders to conserve their solitary long-range weapon for the critical counter-battery tasks that would be their responsibility when the enemy made his landing. It was a burden that Winnie was to continue to bear unaided until the end of the year, but Churchill's constant urging was beginning to pay dividends and, from the beginning of September, additional guns arrived to take on tasks at less extreme ranges.

The honour of firing the first shell ever from England to France fell to Lieutenant-Colonel H. D. Fellowes, CO of the RM Seige Regiment. At 2.00 p.m., after firing a half-charge as a trial, three rounds were fired at C3 battery on the French coast at a range of 38,240 yards. All the bursts were observed by a spotter aircraft which then had to withdraw owing to the presence of 150 German aircraft. The picture *(above)* shows the underground Battery Control Room (located just behind the gun) on a later occasion. Although the official caption states that the officer (unnamed) is firing a shot with his right hand, it is believed that this switch only operated a red light warning personnel that the gun was ready to fire (IWM).

HMG Sceneshifter rejoined the colours at St. Margaret's on September 18 and the Marines of 'B' Battery lost no time in familiarising themselves with their new charge. However it was to be three weeks before they were allowed the luxury of a practice shoot and then only in order to seat its reworked mechanisms. Elsewhere though Nos. 4 and 5 Super Heavy Batteries had arrived in Kent and the first of their rail-

The ability to shell the French coast accurately depended upon the precise alignment of the British Military Cassini Grid with the French Lambert Grid du Nord. Captain W. E. Browne of the Royal Engineers made intersections on French trig points and placed England and France in correct relationship geographically for the first time in history. Previous records were found to be in error by plus half a mile, explaining why pre-war cross-Channel ferries took longer to sail from France to England. This picture shows the CO of the Seige Regiment, Lieutenant-Colonel Foster, with stopwatch beside the plotting table at the rear of the firing point. (Although Winnie's control room has been demolished, compare these pictures with that still remaining at Pooh on page 9.)

mounted, anti-invasion guns were already 'in action'.

First to arrive, on September 3, had been the men of No. 4 Battery, whose guns had previously formed part of the Lincolnshire defences. Battery HQ was established at Sandy Hatch Golf Club, Hythe and the two sections went into action at Hythe and Folkestone railway yards, each equipped with one 9.2-inch gun and responsible for a stretch of coast between Dover Harbour and Dungeness. No. 5 Super Heavy Battery, equipped with the larger 12-inch Howitzer Mk III on Mk II railway mountings, followed soon afterwards arriving at Shepherdswell on September 9. Initially, one of the battery's two guns, Sheba, was sited at Eythorne, but, later in the month, it was pulled back to join its sister Cleo at Shepherdswell, and the Eythorne-based task became the responsibility of the two similar guns of the newly-formed No. 8 Super Heavy Battery. Two other batteries of 12-inch howitzers moved to Kent in the weeks that followed — No. 13 Super Heavy with sections at Sellindge and Hollybush, Ruckinge and No. 12 whose two guns were positioned on the East Kent Light Railway at Ash and Poulton Farm.

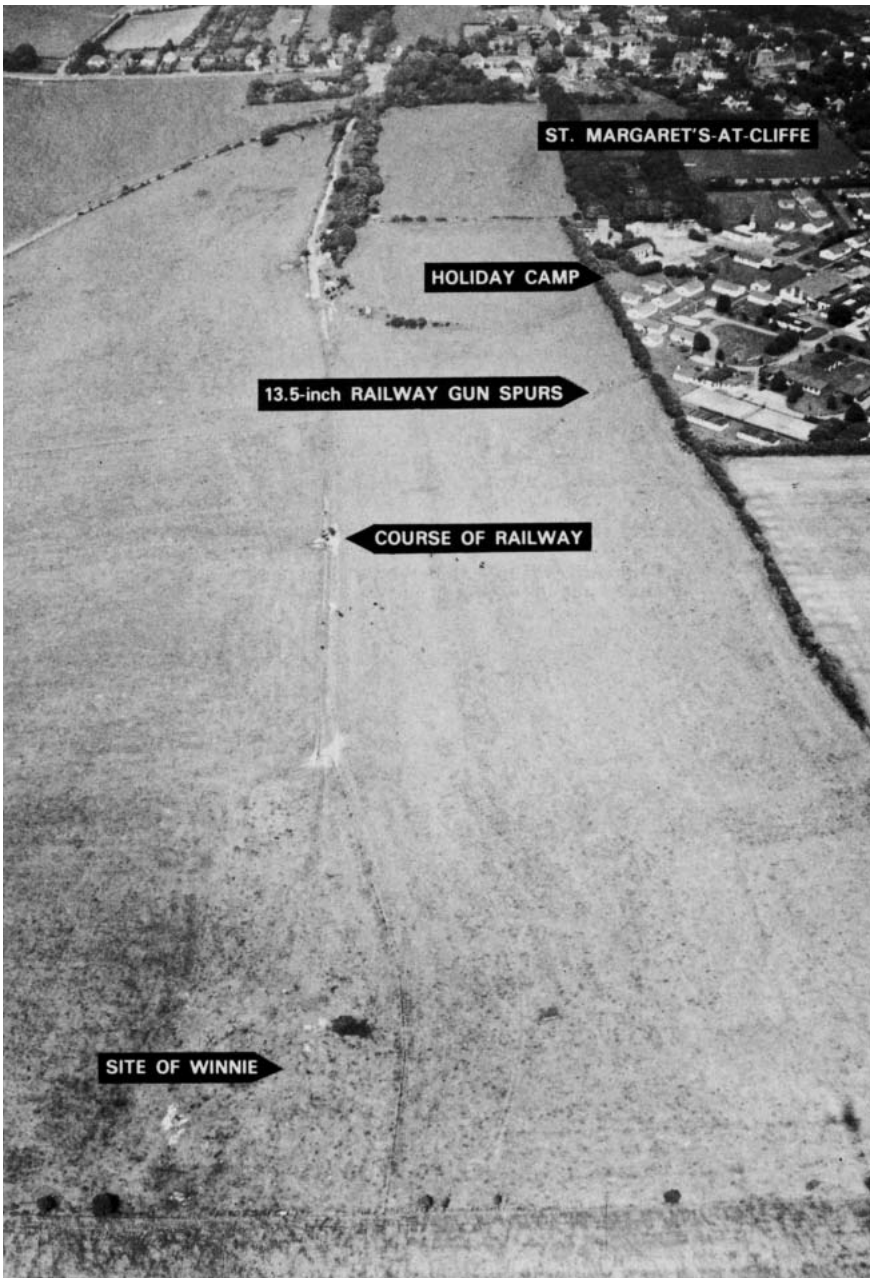
The impressive array of hardware was completed by the 9.2-inch guns of two Canadian units, 'X' and 'Y' Batteries, sited at Golden Wood, Ruckinge and Grove Ferry/Canterbury railway sidings. Later the batteries were to be grouped into regiments and there was to be some redeployment in order to simplify their operational command but, with the threat of invasion still looming large over Kent, their commanders' first concern was to get the guns into action and fully prepared to beat off enemy invaders. In the event, they remained concealed on their sidings, and were only once called upon to fire other than in practice shoots. On the afternoon of October 18, the left section of No. 4 Battery at Folkestone Goods Yard was ordered to engage a German E-Boat in the Dover-Dungeness sector at a range of 24,000 yards. The single round fired at the enemy craft was notable in that it was the first that a Super Heavy battery had fired in anger since 1918, but unfortunately its recoil derailed the gun in question putting it out of action until the following day!

It was to be February 1941 before the biggest of the anti-invasion guns, the 18-inch HMG Bochebuster, arrived at Bishopsbourne Tunnel after a 43-hour journey from Catterick. Like its fellows, Bochebuster was not called upon to engage an enemy target and in consequence was regarded as something of a white elephant by the coastal gunners. However, it was well publicised and, like Winnie, was shown off to visiting VIPs if they came to that part of Kent. Although the anti-invasion guns were to spend long months waiting on the sidelines, if the Germans had crossed the Channel during the winter of 1940-41, their fire-power would have been a most significant factor in the struggle.

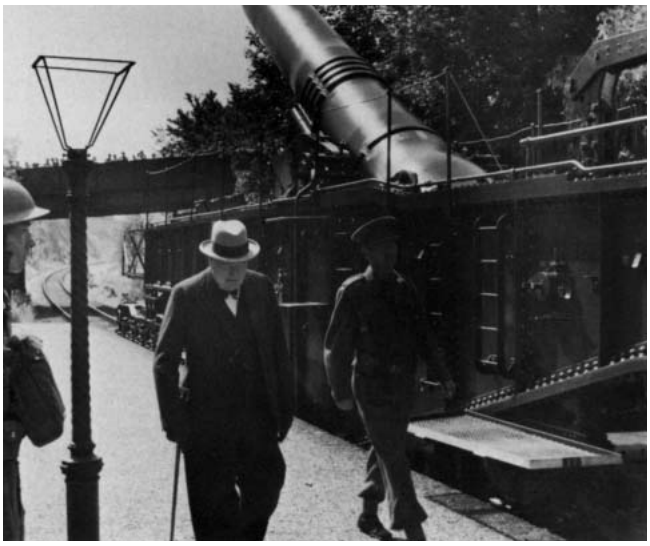
The battle for domination of the narrow Channel waters was by now at a crucial stage. From the German point of view, it was imperative that their guns were seen to be able to fire in immediate retaliation whenever the Dover guns opened up. Such a capability would, they felt sure, deter the British gunners from action against shipping passing through the Straits and would leave control of the vital seaway firmly in German hands.

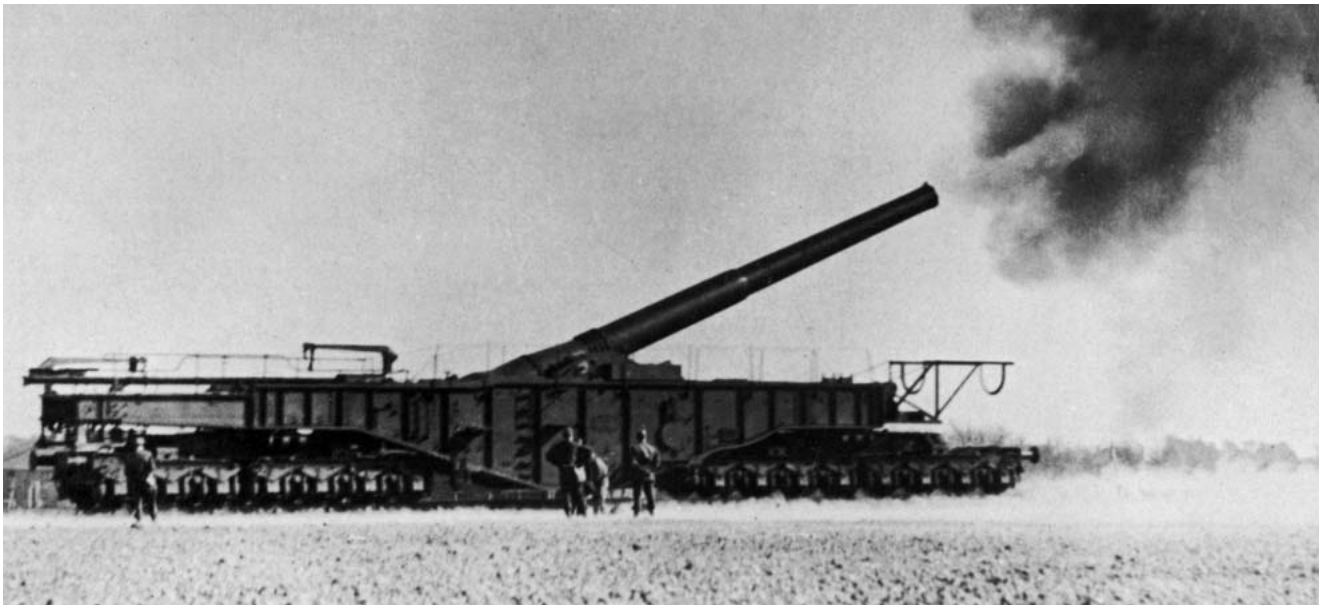
Throughout October 1940, the Cap Gris-Nez guns shelled Dover and Allied shipping more or less at will. Winnie struck back and, as the Marines gained in experience, so their counter-battery became more effective. It was no surprise, therefore, when the German gunners turned their attention away from the town and embarked on ten days of intensive shelling of the Siege Regiment's camp area, killing and wounding several civilians and servicemen in the process.

Above: **Our visit to the site of Winnie in July 1980 — exactly forty years after its installation, via the old railway cutting. The odd bolt is all that remains of the track. In the background are the remaining aerials, adapted for present-day uses, of the WWII Chain Home radar aerials near Swingate.** *Below:* **From the air the course of the railway can just be discerned.**



Railway-mounted guns had played an important role in the Great War. Major Montague Cleeve (now one of our long-standing readers) had been the commanding officer on HMG Bochebuster during that war (he had fired 'The King's Shot' on August 8, 1918) and was the only serving officer in 1939 with experience of railway guns. In November 1939, on his return from the Far East, he received a telegram at Southampton ordering him to the War Office. There he was detailed to trace the WWI rail mountings and set up the School of Super Heavy Artillery at Catterick. He found Bochebuster in a transport shed at Chilwell Ordnance Depot covered in cobwebs and was present when the doors were opened for the first time since 1920. After being mated with an 18-inch barrel, it became the largest of the British WWII heavies. These pictures show the 250-ton gun at its wartime home in the tunnel between Bridge and Bishopsbourne, three miles south-east of Canterbury. Bishopsbourne station was the HQ for the 11th Super Heavy Battery of the Royal Artillery and was visited by the Prime Minister on June 20, 1941. The track was lifted after the war and the cutting is now very much overgrown. In 1975 Lieutenant-Colonel Cleeve tried to ascertain the present whereabouts of Bochebuster. Although an 18-inch barrel was traced at Shoeburyness, it now transpires that this is not from Bochebuster and all the rail gun mountings were melted down at the Royal Arsenal at Woolwich in the early 1960s.





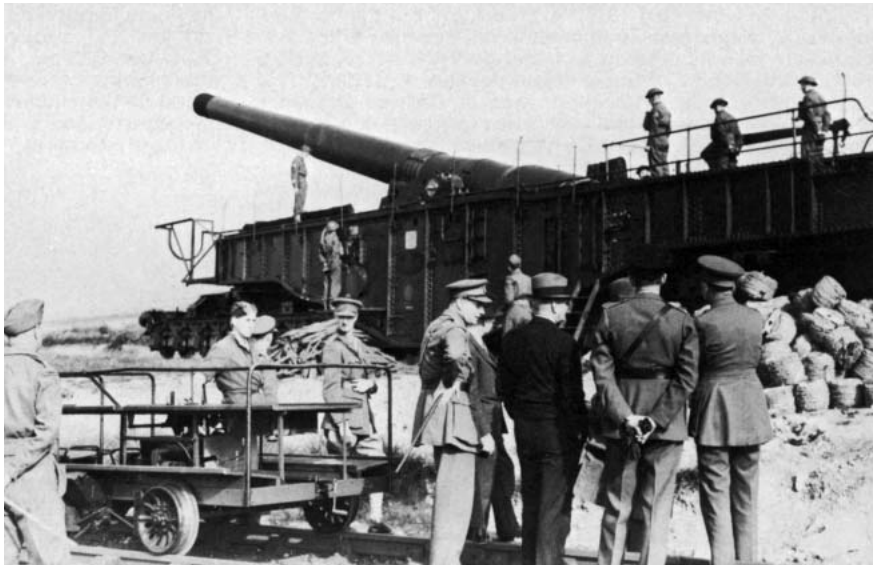
A 13.5-inch railway gun, unfortunately unnamed, in action. These barrels (ex-Iron Duke class) were mated to WWI 14-inch mountings by Vickers-Armstrong at their Elswick works. The restricted, 39 degree elevation gave a range of 22¾ miles with a 1,400lb shell and 400lb super charge but at a risk of straining the mounting. A new lighter shell was therefore designed, weighing 1,250lbs, which also extended the range to 27¼ miles.

Some idea of the effects of the German shelling can be obtained from the reports submitted by the convoy commanders. One such report by a senior officer with Convoy CW14, which was straddled by forty-five 4-6 round salvoes whilst passing through the swept passage in company with the battleship HMS *Revenge* on October 11, described the degree of accuracy as 'astounding' and sparked off a wave of speculation about the reasons for the enemy gunners' success. As all WT equipment had been switched off during the approach to the Straits, radio ranging was ruled out, but prominent amongst other possibilities considered was one that somehow the Germans had been able to lay strings of hydrophones across the swept channel and were able to monitor the progress of shipping using it. Some serious consideration was given to the possibility of changing the course of the path through the minefields but eventually it became apparent that it was the South Foreland lightship that gave the Calais gunners the reference point they needed. Admiral Ramsey, commanding the Dover approaches, subsequently ranked enemy guns at Framzelle, Wissant, Sangatte, Calais and Ambleteuse in order of priority for suppression, but it is worthwhile recording that the threat from long range guns was taken sufficiently seriously for the Flag Officer Portsmouth to enquire of the Admiralty whether his command was threatened by batteries that had recently been sited at Cherbourg.

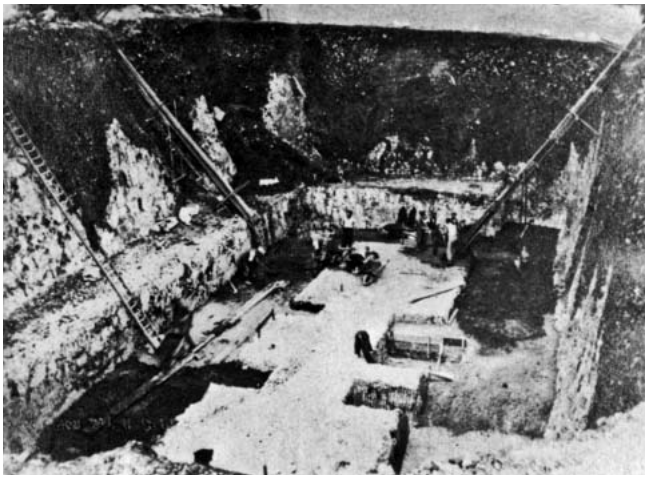
British efforts to gain control of the shipping lane were given a fillip after the visit of the War Office Siting Board late in September. Positions were selected for an additional nine guns at Dover and for a similar number to the west of the town. The new guns were to supplement the existing Dover defences manned by No. 411 Coastal Battery and, after a period of frantic site-work, the first Mark V 6-inch guns were delivered to the barely complete Fan Bay Battery on November 1. By mid-December, all three guns had been delivered, and similar progress had been made at Lydden Spout where a second battery of 6-inch Mark Vs awaited handover. The new sites were fully operational in February 1941 by which time two Regiments shared the responsibility for the defence of the Straits. The new guns at Lydden Spout were manned by men of No. 520 Coastal Regiment, RA, who were also preparing to accept into service two three-gun batteries of 8-inch Mk VIII**s at Capel and Hougham.

The first of the 9.2s, destined to become the hardest worked of the British guns, arrived from Shoeburyness in March 1941. In the meantime, life had become very eventful for the Siege Regiment. Towards the end of November, the Marines had taken delivery of HMG Piecemaker — their second 13.5-inch rail gun — but the newcomer had been an early victim of enemy shelling. On December 10, whilst shorter range weapons shelled an Allied convoy, the Cap Gris-Nez guns had opened up against St. Margaret's in an effort to keep Winnie silent. One of their shells missed Piecemaker by only a couple of yards and, although the veteran was unscathed, its railway track, an axle and one of its bogeys were badly damaged.

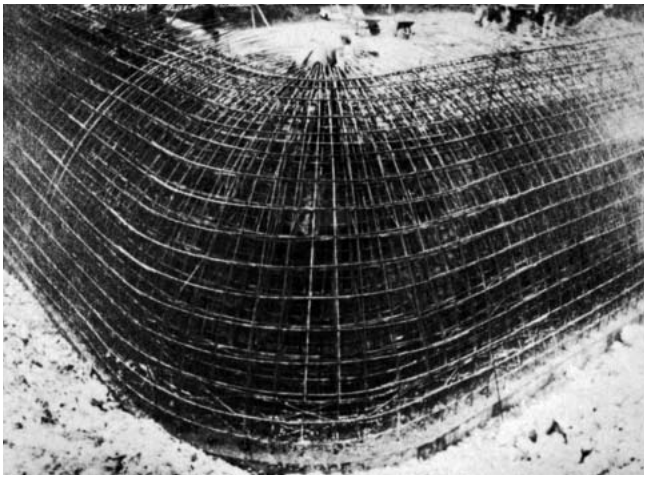
The damaged parts were rushed to Southern Railways' Ashford works for repair. With invasion still very much of a possibility, the temporary loss of one of the rail guns was a serious blow. Had an enemy landing taken place, Piecemaker and Sceneshifter (and a later arrival Gladiator) would have been required to remain at their Dover base for as long as possible, before being pulled back and given a fresh task within the Super Heavy Regiments' fire plan. Practice moves were made to emergency sites at Bekesbourne, Lydden, Guston, and Ashford, and eventually ammunition dumps were established at Lydden, Swingate and Hothfield Cuttings, St. Margaret's Camp, Ashford Ordnance Siding, Canterbury South Station and Lydden Tunnel, any one of which could have been used had the guns been called upon to bombard the invasion beaches. In that event, the gun trains — each consisting of a gun, ammunition and cordite wagons, fitters van, galley wagon, dining coach, and brake-van — would have been moved to the rear area by one of the four diesel locomotives kept in readiness at Guston Tunnel and Pearsons Sidings. Once in position, the guns would have been allocated spotter aircraft from No. 1 CACU and ordered into action against targets

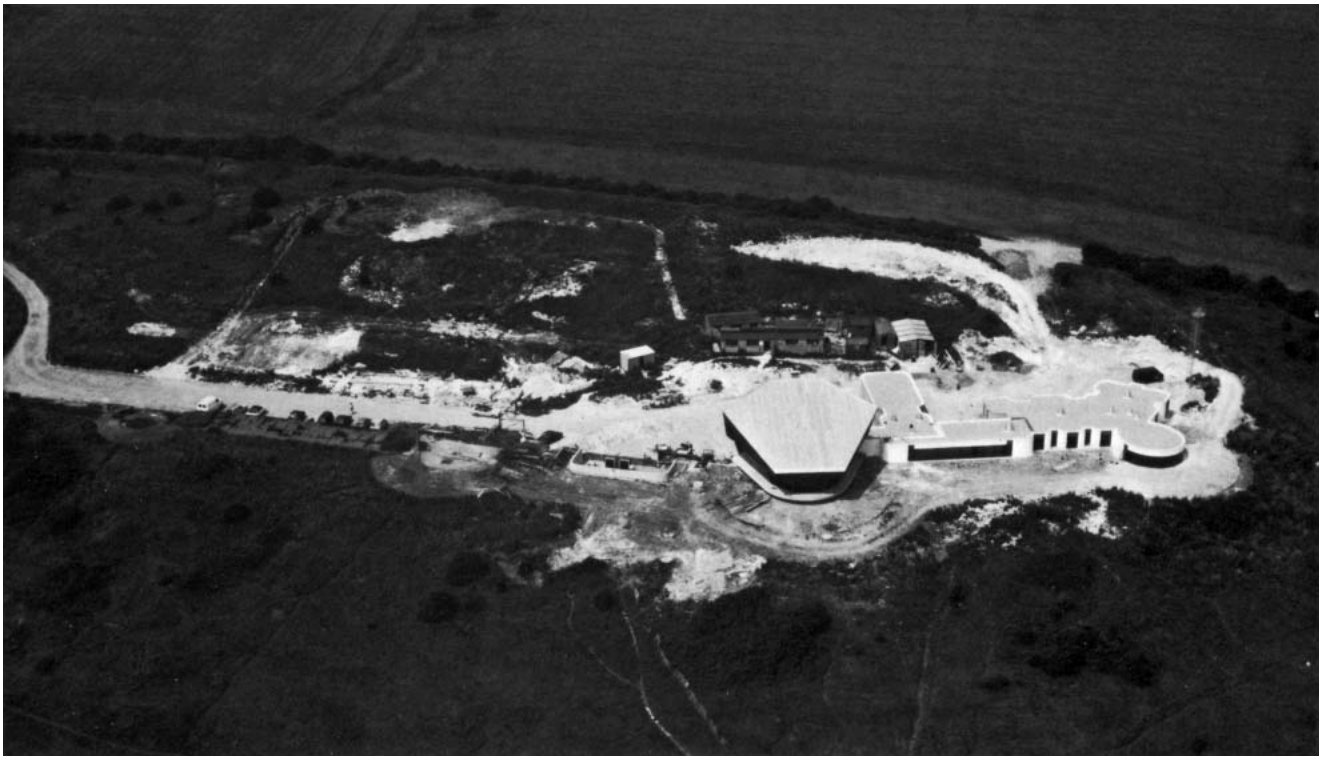


Lieutenant Tanner photographed Gladiator being inspected by Lieutenant General Wesson, Ordnance Chief of the American Army, on August 18, 1941. Although manned by the Army in the First War, to the great disappointment of the Royal Artillery, which knew the mountings well and with both officers and men looking forward to utilising their knowledge, the guns were allocated to the Royal Navy. The Senior Service chose the Royal Marines to man Sceneshifter, Piecemaker and Gladiator.



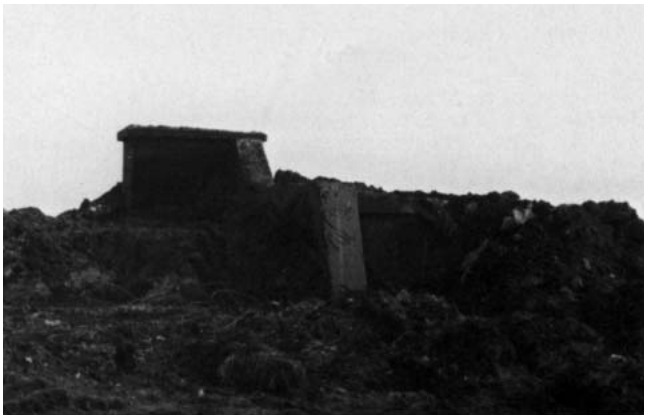
Construction at the three-gun, 8-inch Hougham Battery during the latter part of 1941. The whole site (MR292396), on the firing range two miles south-west of Dover, has now been covered over by spoil from the ill-fated Channel tunnel (Whorwell).





Above: Langdon Battery (MR341424), on the cliff top a mile east of Dover Castle, was originally built shortly after the turn of the century to emplace four 10-inch, although three 9.2s were installed. During WWII it mounted three 6-inch but was converted into a coastguard station which was opened by Prince Charles on November 23, 1979 (Skyfotos).

Dating from the Napoleonic Wars, Citadel Battery (MR305403) mounted 7-inch Armstrong guns until replaced with three 9-inch in 1902. Although the guns were removed in the 1950s, the battery still remains largely intact near the HM Borstal (Dave Collyer).



Authorities on both sides of the Channel are relentlessly destroying history. Latest victim to disappear as recently as April 1980 was Capel Battery (MR242379) where only the top of the left shaft to No. 1 magazine remains (John Guy).

selected from a list that included all major road junctions in the vicinity of the invasion beaches between Ramsgate and Folkestone.

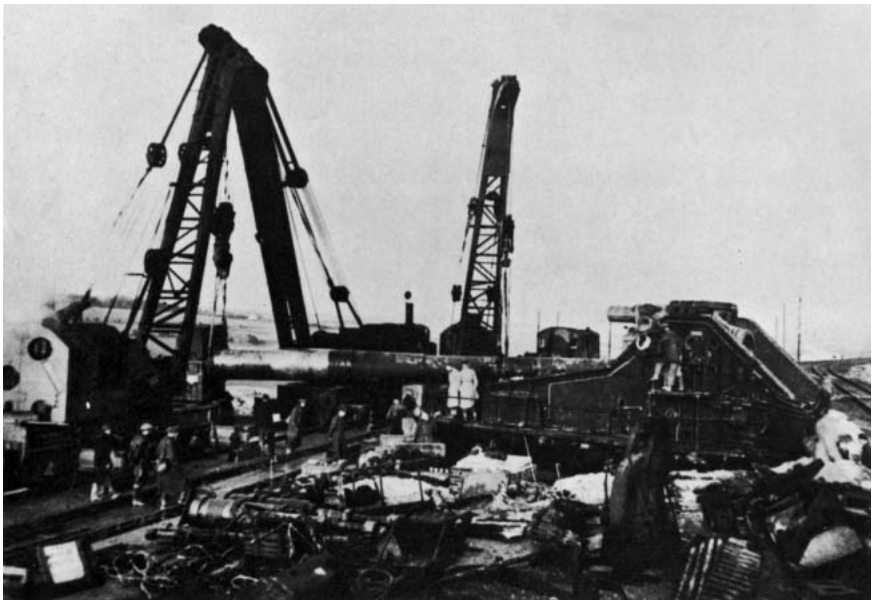
While Piecemaker was undergoing repair, the 'proof' mounting from the Isle of Grain, arrived at St. Margaret's to join Winnie in the counter-battery task. Although having the same type of barrel as Winnie, Pooh, however, proved to be a problem-child and, for some weeks after the formal handover on February 9, 1941, Vickers technicians stayed on site trying to improve on what was fated to remain a 'difficult' ramming mechanism.

Dummy gun positions had been constructed on Churchill's orders for both Winnie and Pooh several hundred yards away on either side and the wooden 'guns' appropriately camouflaged. One humourous tale is told about the dummy Pooh when a German aircraft appeared overhead on a bombing run only to drop a wooden bomb!

Fears that the 14-inch barrels would have only a short life had proved to be fully justified. It had been necessary to change Winnie's during the Christmas lull after the big gun had fired only forty-seven operational rounds and, consequently, local commanders were loath to use either Winnie or Pooh. Later in the year however both 14-inch guns and Sceneshifter were in action against targets in Calais and, subsequently, Winnie and Pooh fired six rounds at the forward aerodrome at St. Inglevert, but were compelled to break off the action when enemy fighters forced their Curtiss Tomahawk spotter to return to its Manston base.

The new 9.2-inch guns had been allocated to No. 540 Coastal Regiment RA, and, from mid-1941 onwards, their four-gun South Foreland position played an ever-increasing part in operations in the Channel. Work was also well advanced at nearby Wanstone Farm, chosen as the site for two 15-inch guns intended for Singapore but made available for urgent delivery to the Dover based regiment.

Now the Battle of the Channel entered its second phase. Both sides had demonstrated their capability and, although there was little that the British could do to deter their German counterparts from retaliation, the introduction of the South Foreland guns in particular did an excellent job in denying enemy shipping freedom of passage through the Straits. It was a battle in which radar played a most important part and, although the Germans found ways to jam some of the early British equipment, they achieved no such success with the rotating-aerial Chain Home Low coast-watching stations at Fairlight, Dover and Foreness which were specifically designed to detect surface and low-level intruders at ranges of up to fifty miles.



Above: **November 1940. Pooh's 14-inch Mk VII barrel being threaded through the cradle of the mounting which had originally been designed to take the 18-inch gun from HMS Furious (Whorwell).**

Above: **On its open mounting, Pooh was protected as much as possible by earth ramparts (IWM).** *Below:* **Today the earth has been bulldozed into a large mound obliterating the precise gun position but leaving the Battery Control Room intact. The tops of the lift shafts to the two underground magazines indicate the line of the railway track.**

The Pooh site in July 1980 beside the track from St. Margaret's to Kingsdown. The land is now part of Townsend Farm.

The interior of Pooh's Battery Control Room. Compare these pictures with those of Winnie on page 3.

THE KENTISH GUNS

The Anti-Invasion Guns

Unit	Equipment	Site	Date
2nd Super Heavy Regiment, Royal Artillery			
RHQ		Charlton Park, Bishopsbourne	
5th Super Heavy Battery, Royal Artillery			
Section	1 x 12-in Howitzer SHEBA	Shepherdswell	September 1940
Section	1 x 12-in Howitzer CLEO	Shepherdswell	September 1940
Section	1 x 12-in Howitzer	Eythorne	September 1940
8th Super Heavy Battery, Royal Artillery			
Section	1 x 12-in Howitzer	Eythorne	October 1940
Section	1 x 12-in Howitzer	Eythorne	October 1940
11th Super Heavy Battery, Royal Artillery			
Battery	1 x 18-in Howitzer BOCHEBUSTER	Bishopsbourne Tunnel	February 1941
Battery accommodation at Lenham Oast House, and ammunition store at Lyminge			
12th Super Heavy Battery, Royal Artillery			
BHQ		Adisham	
Right Section	1 x 12-in Howitzer	Staple Halt	October 1940
Left Section	1 x 12-in Howitzer	Poulton Farm	October 1940
3rd Super Heavy Regiment, Royal Artillery			
RHQ		Sellindge, Guinea Hall	September 1940
4th Super Heavy Battery, Royal Artillery			
Battery HQ	—	Sandy Hatch Golf Club	September 1940
Left Section	1 x 9.2-in	Folkestone Railway	September 1940
Right Section	1 x 9.2-in	Hythe Railway	September 1940
Redeployed			
Battery HQ	—	Wassall Court, Rolvenden	December 1940
Left Section	1 x 9.2-in	Rolvenden Station	December 1940
Right Section	1 x 9.2-in	Wittersham Road Station	December 1940
13th Super Heavy Battery, Royal Artillery			
Battery HQ	—	Sellindge	September 1940
Left Section	1 x 12-in Howitzer	Sellindge Railway	September 1940
Right Section	1 x 12-in Howitzer	Hollybush Railway	September 1940
'X' Super Heavy Battery, Royal Canadian Artillery (under command, 13th Super Heavy Battery)			
Battery HQ	—	ii) Littlestone	
		ii) Kingsnorth, Nr. Ashford	September 1940
Battery	2 x 9.2-in	Golden Wood Siding	September 1940
Replaced in Regiment by 15th Super Heavy Battery RA			February 1941
'Y' Super Heavy Battery, Royal Canadian Artillery (under command, 13th Super Heavy Battery)			
Section	1 x 9.2-in	Grove Ferry	September 1940
Section	1 x 9.2-in	Canterbury	September 1940
Replaced in Regiment by 7th Super Heavy Battery RA			November1940
15th Super Heavy Battery, Royal Artillery			
Formed Catterick 1940. Took over guns from 'X' Super Heavy Battery RCA.			
	2 x 9.2-in	Golden Wood Siding	February 1941
17th Super Heavy Battery, Royal Artillery			
Battery	1 x 9.2-in	Kingsnorth	March 1941
	1 x 9.2-in	Sevington Spur	July 1941
7th Super Heavy Battery, Royal Artillery			
Battery	2 x 12-in Howitzer	Elham	January 1941
Prior to January 1941 Battery had served with 2nd Super Heavy Regiment at same positions			
Associated Units			
154 Railway Operating Company RE		Operating in conjunction with both Super Heavy Regiments	
B Troop 1st Sound Ranging Battery RA			

The Marine Guns

Royal Marine Siege Regiment			
RHQ		Portal House St. Margaret's	August 1940
'A' Battery No. 1 Troop	1 x 14-in Mk VIII WINNIE	St. Margaret's	August 1940
'A' Battery No. 2 Troop	1 x 14-in Mk VIII POOH	St. Margaret's	February 1941
'B' Battery No. 3 Troop	1 x 13.5-in SCENESHIFTER	Guston	September 1940
No. 4 Troop	1 x 13.5-in PIECEMAKER	Guston	November 1940
No. 5 Troop	1 x 13.5-in GLADIATOR	Guston	May 1941
540 Coast Regiment Royal Artillery			
RHQ		South Foreland	1941
D E F Troops	3 x 6-in (45 deg. mtg)	Fan Bay	February 1941
G H I Troops	4 x 9.2-in Mk X	South Foreland	May 1941
J K L Troops	2 x 15-in	Wanstone Farm	
	JANE		March 1942
	CLEM		May 1942
520 Coast Regiment Royal Artillery			
Troops	3 x 6-in (Mk V)	Lydden Spout	1941
Troops	3 x 8-in Mk VIII	Hougham	1941
Troops	3 x 8-in Mk VIII	Capel	1941

Above: **One of the most effective of the Dover coastal batteries was that at South Foreland. The layout of the site was decided in October 1940 and preliminary work on the road approaches and water supply commenced three months later. It was the largest battery constructed by the Royal Engineers in the Dover area and included bomb-proof ammunition magazines, two power houses (still to be seen today) with 120 kilowatt generators, workshops, observation posts, an underground plotting room (also still extant) and shelters for 1,000 men below ground. The first of the four 9.2-inch guns was commissioned in July 1941 with the others following at monthly intervals. No. 1 gun was named Shoeburyness; No. 2 Prinz Eugen; No. 3 Gneisenau and No. 4 Scharnhorst. Here Members of Parliament watch the battery in action on May 11, 1943 (IWM).**

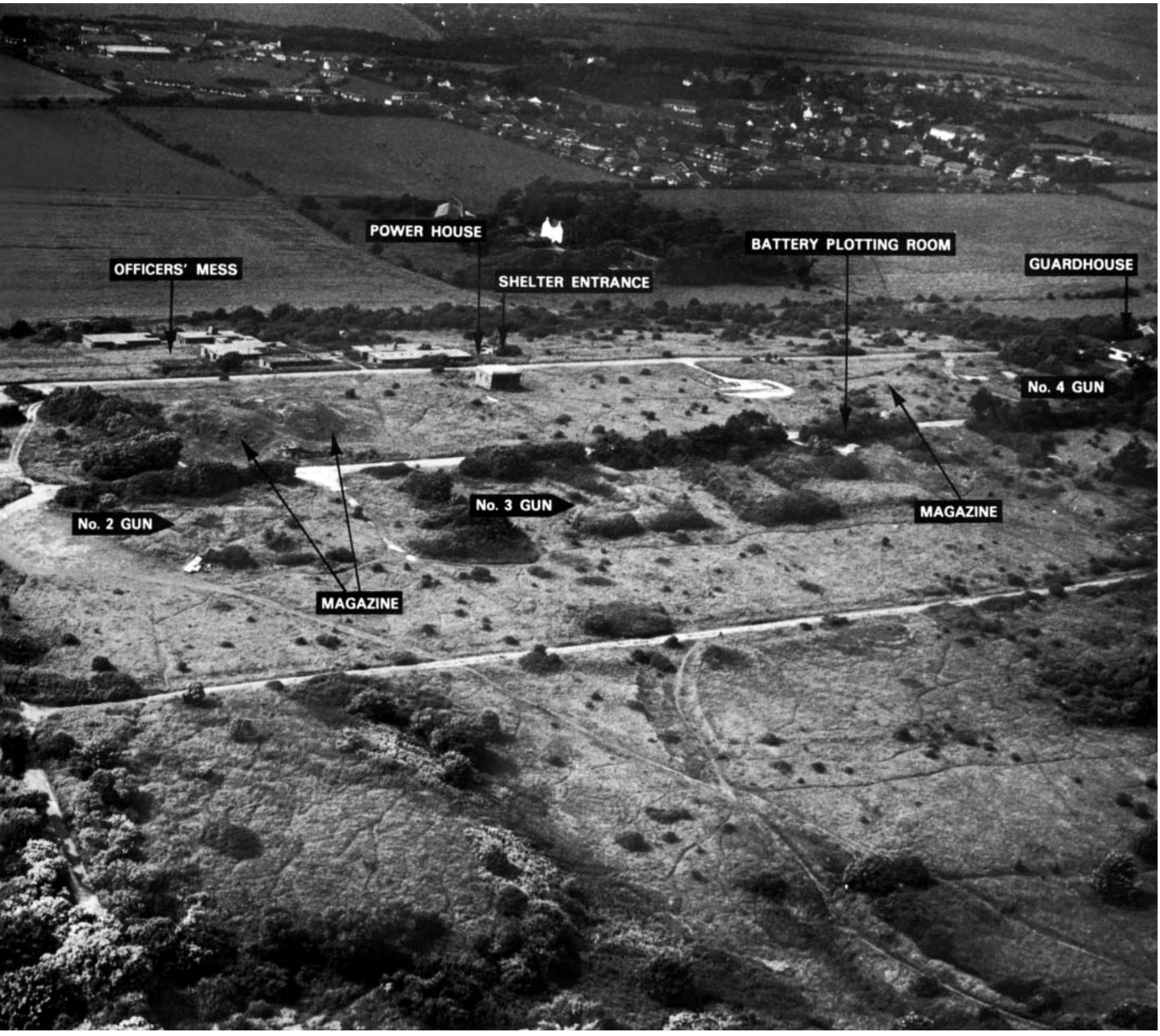
It was therefore particularly ironic that Fairlight Radar should have been out of action on February 12, 1942, for that was the day on which the *Scharnhorst, Gneisenau,* and *Prince Eugen* made their celebrated dash through the Channel to the relative safety of home waters. The sudden realisation that the enemy warships were on the move caught the coast gunners unawares. Orders were given to move one of the 13.5s from Guston to Martin Mill and Winnie and Poohs' crews were hurriedly recalled from training elsewhere and assembled ready for action. Whilst confused reports of the enemy force's progress filtered back, the Marines stood by until 12.30 p.m. when the local coast artillery commander rescinded his earlier orders and permitted the 14-inch guns to fire one round each on a pre-determined position. It was a futile gesture. Although the range was a mere 30,000 yards, neither shell struck the target and, without a spotter aloft, there was little chance of the gunners improving their aim. Within a few minutes they were themselves on the receiving end of some more accurate fire as the Cap Gris-Nez batteries boomed their inevitable reply. The 9.2s at South Foreland were marginally more successful, entering action at 11.50 a.m. and firing thirty-three rounds. The gunners claimed that three of their 390lb shells struck the *Scharnhorst* but there is nothing in the official German account of the episode to suggest that they were, in fact, so accurate.

In March 1942 the first 15-inch gun, Jane (named after the young lady in the *Daily Mirror* strip cartoon), arrived at Wanstone Farm and, in early May, it was joined by Clem — some say named after the Deputy Premier Clement Attlee whilst others that it stood for Churchill's wife Clementine. The installation of two 15-inch guns was as a result of a directive from the Chiefs-of-Staff in September 1940 who called for the provision of guns capable of engaging ships on the far side of the Channel. Vickers-Armstrong were given the contract for the mountings which were to be slightly modified versions of those used at Singapore in fully traversable turrets. The loading was to be carried out by using self-propelled trollies operating on concrete paths from bomb-proof magazines to a davit which swung the shell or cartridge into position by means of a portable tray. The specification for the gun stipulated a rate of fire of one round

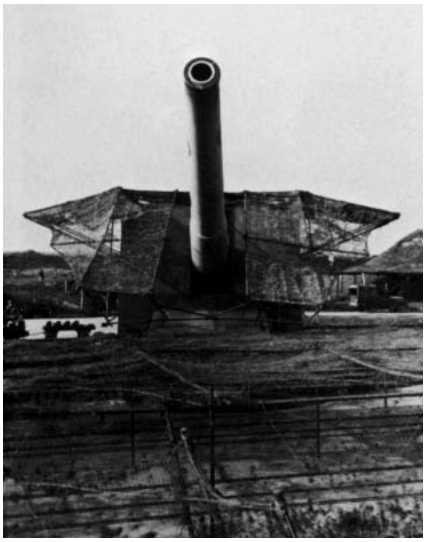
In July 1980 we visited the same spot as the MPs — signal wires and barbed-wire barricades having given way to the less prickly defences of nature.

Above: All the South Foreland guns were in open pits with shielded barbettes to protect the crews. This is the Prinz Eugen — No. 2 Gun. *Opposite:* Today the emplacement has been filled in and without John Guy of the Kent Defence Research Group to guide us we would have had great difficulty pinpointing the precise spot. The extent of John's research into the history of South Foreland is indicated by the fact that he found this photograph in the National Portrait Gallery!

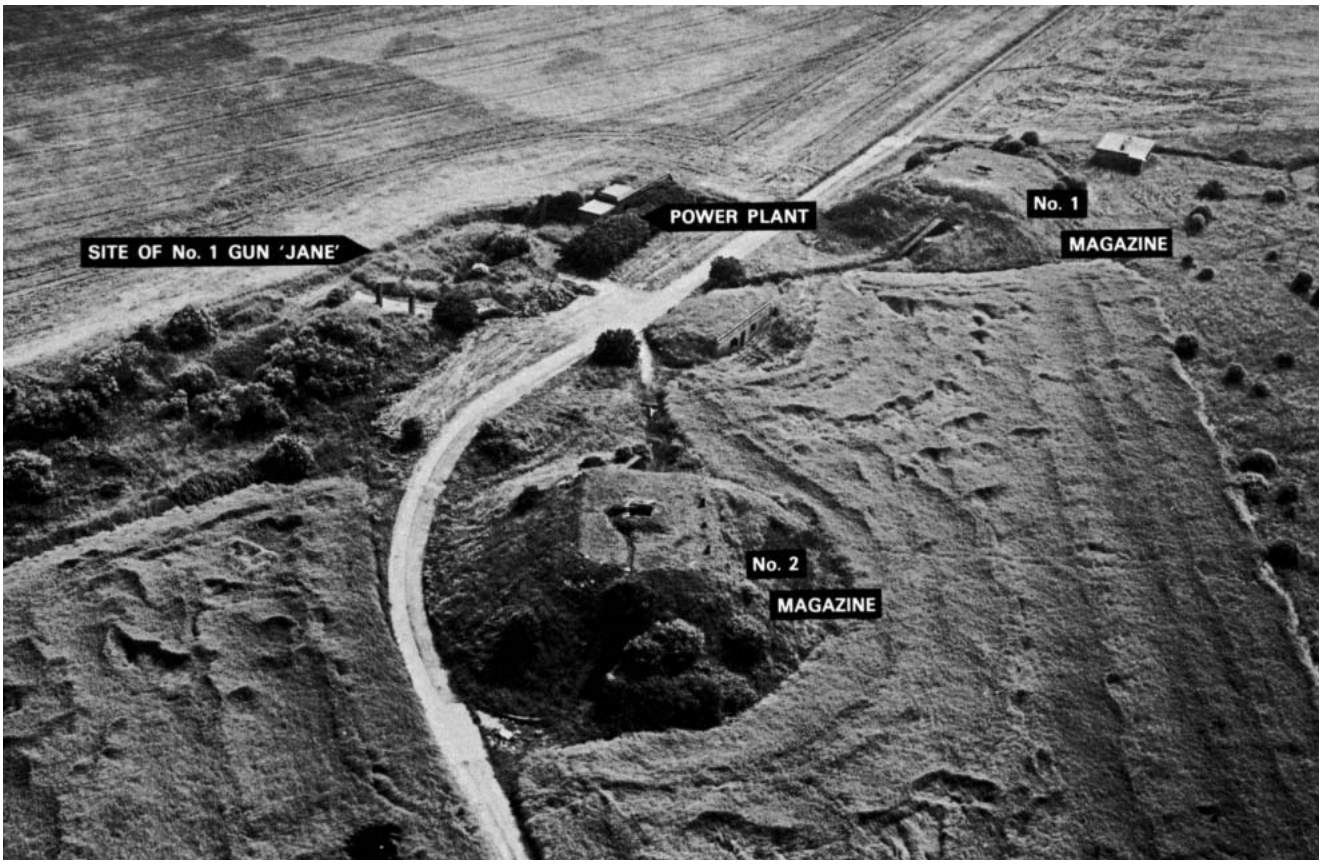
Whereas Shoeburyness, Prinz Eugen and Gneisenau were spaced fairly evenly, about 100 yards apart, Scharnhorst lay some 800 feet to the east — right beside the new houses of St. Margaret's Road (Whorwell).


POWER HOUSE
OFFICERS' MESS
SHELTER ENTRANCE
BATTERY PLOTTING ROOM
GUARDHOUSE
No. 4 GUN
No. 3 GUN
No. 2 GUN
MAGAZINE
MAGAZINE

Two sites 400 yards apart on Wanstone Farm (MR353433) were chosen to mount the 15-inch guns Jane and Clem. The Admiralty undertook to supply the guns, mountings and power plants while the War Office accepted responsibility for all the construction work including the laying of a railway track to the site. The mountings, which were similar to the 14-inch, were built by Vickers-Armstrong. Self-propelled trolleys were provided to feed shells and charges from the twin magazines running on concrete paths to each gun. Vickers completed the drawings for the mountings on January 18, 1941 and they were built by February 1942. Severe frost had hampered Royal Engineers working at the site but the first gun was in place on April 20 followed by the second on May 19 when the Admiralty handed them over to the Army to be operated by the Royal Artillery's 540 Coast Regiment. *Above:* Members of the regiment practise operating Jane using leather-covered shells. The guns were fired from the gun platform on the right-hand side (National Portrait Gallery). *Below:* Work on dismantling the Wanstone battery began on March 15, 1957, preceded by the removal of the guns from Fan Bay (MR351428) and South Foreland. However, the concrete posts, situated either side of each gun to support camouflage netting, remain to give a mutual point of reference.



No. 1 Gun Jane. Note the fire bucket stand to the left of the gun — still existing today (National Portrait Gallery).



As all four magazines are of the same design, it is difficult to say exactly which one this is. Our comparison picture was taken in

Jane's westernmost shell store. The charges were kept in a separate room on the right (IWM).

The Prime Minister shows off Jane to Field-Marshal Jan Smuts and his son (on the right). Captain Horton photographed the party inspecting Wanstone on October 23, 1942 (IWM).

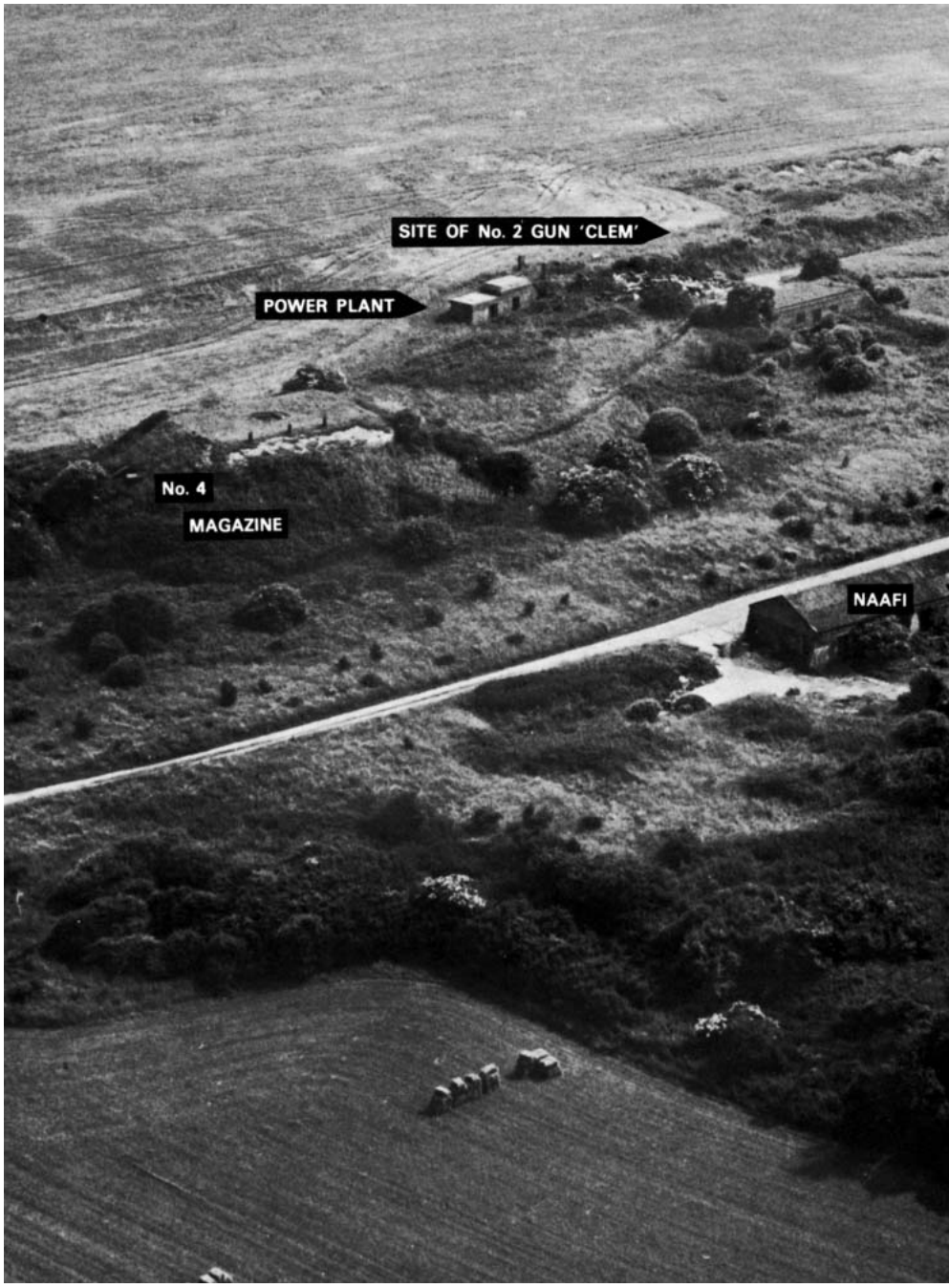
John Guy enjoys standing in for Winston Churchill on the same spot thirty-eight years later. The 15-inch guns were originally developed for the defence of Singapore.

per minute, an elevation of 2½ to 50 degrees and a traverse of 160 degrees. Completion of the Wanstone battery with its two power houses, observation posts, twin bomb-proof ammunition stores and plotting rooms was a significant milestone and comparative studies at the end of the war established that the 15-inch was probably superior to any weapon ranged against it. They could engage targets at ranges of up to 36,900 yards and they soon joined the hard-pressed 9.2s in the regular night actions that took place at approximately fortnightly intervals as the German convoys took advantage of a feeble moon to try and slip unnoticed through the Straits.

August 1942 was a typical month. A German convoy was scheduled to pass through the Channel on the night of the 16th and, for three nights beforehand, the Cap Gris-Nez batteries blasted the Dover positions, bracketing Winnie and severing the railway at Guston. At 1.28 a.m. on August 13 the 15-inch guns went into action for the first time, firing twenty-one rounds, but the Germans too had strengthened their defences and were quick to reply. On three separate occasions during the days that followed, up to twelve guns at a time joined the enemy bombardment, narrowly missing Winnie, and temporarily putting Pooh's power house out of action.

Three months later, the 406mm (16-inch) guns of Batterie Lindemann at Sangatte nearly scored a notable success when they hit Pooh's ready-use magazine. Fortunately there were no casualties on that occasion but, when the Wanstone guns later sank an enemy raider, their success was soured by the effectiveness of the retaliatory fire which straddled part of the local light anti-aircraft defences and killed eleven gunners.

Dover suffered cruelly in this exchange — as it did throughout the war — and inevitably the regular shelling drew protests from the civilian population. There was little that the authorities could do to dispel a widely-held view that Dover and its citizens were the sufferers in a series of often pointless duels between the opposing gunners. Official reassurances that there had been no exchanges between the guns, and that the shelling from Dover was primarily directed against shipping, did nothing to lessen the groundswell of protest. During the four years in which they were in the front-line, the Kentish towns suffered over one hundred civilian dead and four times as many injured as a result of 3,514 enemy shell-bursts. Nearly one thousand dwellings were destroyed and three thousand more damaged and, with 2,284 shells falling on Dover alone, the citizens' anger is perhaps understandable — even if it was misplaced.



Above: The site of Bruce (MR367453) in the valley straddling the path from Hog's Bush to the cliff top. Although never used operationally, this was the unique site of Britain's super long-range gun capable of firing a 256lb shell seventy miles. The gun consisted of a standard 16-inch naval barrel fitted with a liner converting the bore to 8-inch but with a breach enlarged to take a 13.5-inch cartridge. However, barrel wear was so bad that the life of each barrel was only 28 rounds!

Gradually the tide of war swung in favour of the Allies and, although nothing happened to alter the balance of cross-Channel fire-power, the risk of a German invasion had so diminished that the Siege Regiment was able to hand its rail guns to 12 Corps, and place Winnie and Pooh — the latter fitted with a new hoist and ramming motor — on 'care and maintenance'.

At the beginning of 1943 there was a newcomer at St. Margaret's. Bruce was an experimental hyper-velocity gun that pointed almost due north towards the Shoeburyness ranges off the Essex coast where the shells could be accurately plotted for range and velocity and, perhaps, recovered after landing on the mud flats. It was never used operationally. Another trial which has often been connected with the area, although the gun (probably an experimental 5.25-inch AA gun relined down to 3.7 inches) was situated nowhere near Dover, was a series of air bursts, fired only on very clear days, with smoke-filled shells at heights of up to 95,000ft. The results must have been clearly visible on the Continent and, even to this day, the purpose is still a bit of a mystery although it could well have been one of the many factors which convinced the Germans that the D-Day landings were to be made on the Pas de Calais.

There was no respite though for the Wanstone and South Foreland Batteries which, by mid-1944, had been in action against enemy convoys on nearly fifty occasions and had brought their tally of kills to twenty-five. In May of that year Winnie and Pooh were restored to the order of battle. Officially their role was 'to engage slow-moving sea targets beyond the range of 540 Coast Regiment's 15-inch guns' but, with D-Day only a month away, there was a strong hint that they might have a part to play in the land battle that lay ahead. (Winnie and Pooh were never intended for use as anti-shipping guns. They were installed for counter-battery work and their old ex-proof carriages had virtually no traverse mechanism.)

From October 1943 onwards the coast gunners found their style cramped by opposition from an unexpected quarter, when No. 8 Pathfinder Group of RAF Bomber Command complained that concussion from guns in the South Foreland sector was disturbing some particularly sensitive apparatus that they had installed alongside Swingate Chain Home Low radar station. In a strongly-worded protest to the Admiralty, the Flag Officer Dover, Vice-Admiral H. D. Pridham Whippell, complained that on several occasions RAF restrictions had com-

pelled him to withold artillery support for MTBs crossing the Channel to attack enemy inshore shipping. The Admiralty — unaware of the purpose and limitations of the equipment — drew the attention of their counterparts at the Air Ministry to the need to integrate anti-shipping effort, but all to no avail. The beam equipment at Swingate — known as Station Type 9000 — was essential for the direction of Pathfinder aircraft over their target and was also occasionally used by other crews for blind-bombing missions. It was only necessary to limit the use of the coastal guns whilst the Pathfinders were over the target and it was left to the Flag Officer to liaise with No. 8 Group to ensure that there was no clash of interests. Nevertheless, the inference was clear: the interests of the RAF came first.

Eventually the Swingate equipment was superseded but, in March 1944, it was reactivated to undertake what were officially described as 'important commitments in the near future' and restrictions were reimposed. What these commitments were is not altogether clear; possibly they were connected with the attacks on the Pas de Calais V-weapon sites, but it seems more likely that they formed part of the elaborate electronic deception exercise staged on D-Day by aircraft of Nos. 617 and 218 Squadrons.

D-Day itself proved to be something of an anti-climax for the Dover gunners with the Germans at Cap Gris-Nez and Wissant nervously opening fire at the slightest provocation. Once again Dover and its luckless citizens were on the receiving end of many wides and overs and, on June 7, both Winnie and Pooh were ordered to fire eleven rounds at the Sangatte battery that had been responsible for much of the previous day's damage. In the weeks that followed, the German gunners stood fast awaiting the inevitable but they missed no opportunity to shell the guns on the Kentish shore. In mid-August, the Allied armies finally smashed their way out of the confines of the Normandy beachhead. As their advance carried them nearer to the heavily defended Pas de Calais, the men of 21st Army Group braced themselves for the assault on the fortress-like gun positions that dotted the coast. The time had arrived for the Dover guns to take the offensive.

This is the earliest post-war aerial cover we could trace of the defences north of Dover. The RAF photo library does not hold any cover of the area — this was taken by Hunting Surveys Limited on July 1, 1961 from 5,280ft (Aerofilms).

Part Two: The Pas de Calais

Cap Gris-Nez with the shattered emplacements of Batterie Grosser Kurfurst in the foreground. The rebuilt village of Framzelle, almost totally destroyed in 1944, lies behind the casemates.

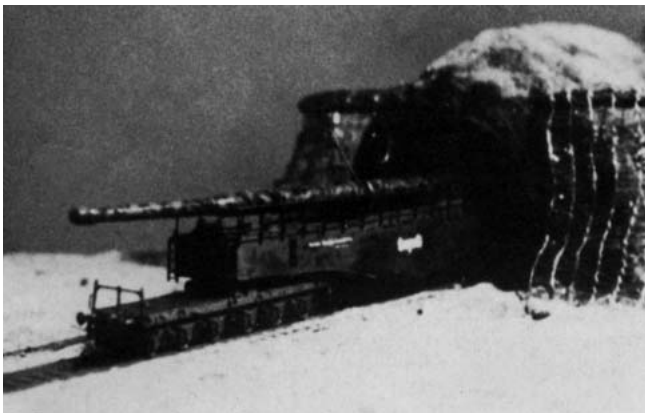
'Wir kampfen bis zur letzen grenate' — We will fight to the last round. Nothing could have illustrated the fortunes of war more dramatically than the inscription on the wall of Batterie Lindemann's No. 1 turret — Anton. Lindemann, with its triple 406mm guns, was one of the most formidable of the twenty-four German naval gun batteries sited along the Channel coast between Boulogne and Calais, and its capture by troops of the Canadian 8th Infantry Brigade during September 1944 brought to a close a chapter of history that had opened more than four years previously.

Heavy artillery was part of the German military tradition and the summer of 1940 found the Berlin High command able to direct an impressive concentration of long-range guns to the newly-won Channel coast. Whilst the forces required for the proposed amphibious assault on south-east England assembled at French and Belgian ports, the heavy guns were to bombard British shipping and targets on the opposite shore. Domination of the narrow Channel waters would have to be assured before the fleet eventually sailed and thereafter the coast artillery's role would be to provide supporting fire for the assault.

Centre of activity for the German gunners was the stretch of coastline between Wimereux and Sangatte. The area was well-served by both road and railway links and the undulating countryside, rising sharply behind the Cap Gris-Nez promontory to a height of over 150 metres above sea level, afforded a number of excellent vantage points from which to direct fire against distant targets. By September 1940, the Germans had assembled no fewer than nine batteries in this sector alone and, although the early brunt of the shelling was borne by the rail guns operating from points on the line between Wimereux and Marquise, there were already well-established static batteries at Sangatte (2), Wissant, Cap Gris-Nez (2) and Haringzelles.

There was of course no invasion and the role of the guns became one of 'Channel-

The marble quarry at Hydrequent, near Marquise was the home of one of the 280mm K5 railway guns of the 244 Naval Coastal Battalion. Its 250ft long bomb-proof shed is pictured *(above)* after its capture in 1944 and *(below)* as it can be seen today.



The German K5 railway gun could hurl a 561lb shell some 38 miles at its maximum elevation of 54 degrees. It is believed that a total of twenty-five guns were produced during the Second World War.

domination'. As has been described earlier, there was no actual 'duelling' between the German guns and their British counterparts. The British sought to deny German shipping free access to the Channel and the German gunners' job was to prevent them from doing so. They did this by shelling the Dover sites and disrupting communications between the guns and their OPs as well as by deliberate 'deterrent' shelling of the coastal towns.

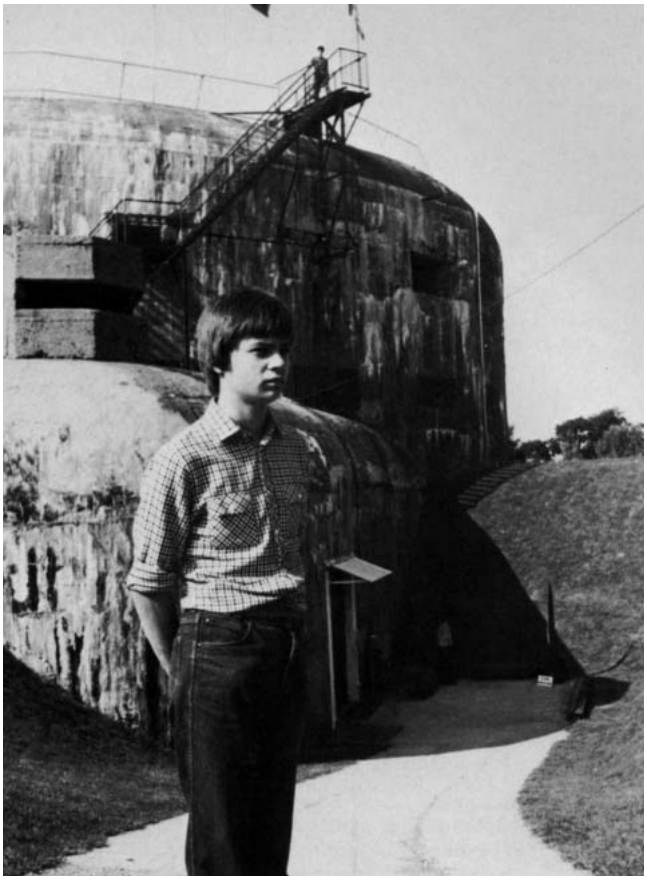
Late in 1941, Adolf Hitler issued orders for the strengthening of the entire length of the so-called Atlantic Wall to the well-established West Wall specifications. The improvements, which were undertaken by Organisation Todt — the highly-skilled, defence work task force — were primarily of an engineering nature and involved adding extra thicknesses of reinforced concrete to existing structures rather than the deployment of extra weapons. The length of coastline between the Rivers Seine and Scheldt was allocated one of the highest priorities but it was not until March 1942 that a further directive from Berlin shaped the eventual layout of the defences there.

The order — Directive No. 40 'Competence of Commanders in Coastal Areas' — was to have far-reaching consequences and was to spark off bitter rivalry between the respective commanders in the west. The cause of the in-fighting was the Fuehrer's insistence that the onus of engaging an enemy force which had not yet landed should rest solely with the Navy. The Army would not be called into action until such time as the enemy had gained a lodgement ashore. Thus all off-shore

GERMAN COASTAL GUNS IN THE CALAIS-BOULOGNE SECTOR

Unit	*Battery*	*Equipment*
204 Naval Coast Battalion	Malo Terminus	4 x 194mm
HQ — Ostend	St. Pol-sur-Mer	3 x 145mm
244 Naval Coast Battalion	Waddon	4 x 170mm
	Batterie OLDENBURG	2 x 240mm
	Calais-Dique Est	3 x 75mm
	Calais-Bastion II	3 x 194mm
	Calais-Fort Lapin	2 x 164mm
	Sangatte	3 x 170mm
	Sangatte-Batterie LINDEMANN	3 x 406mm
242 Naval Coast Battalion	Wissant-M3	4 x 150mm
	Framzelle-Batterie GROSSE KURFURST	4 x 280mm
	Cap Gris-Nez	3 x 170mm
	Haringzelles-Batterie TODT	4 x 380mm
240 Naval Coast Battalion	Wimille-Le Tresorerie	
	Batterie FRIEDRICH AUGUST	3 x 305mm
	Boulogne-Fort de la Creche Ouest	4 x 75mm
	Boulogne-Fort de la Creche	2 x 240, 1 x 194, 4 x 105mm
	Boulogne-Cap d'Alprech	4 x 94mm
	Boulogne-Mont de Couppe	1 x 150, 3 x 138mm
	Boulogne-Breakwater	4 x 88mm
Railway batteries under Army command	Calais Grables (690 Railway Battery)	2 x 280mm Railway Guns
	Sangatte-Cement Factory	2 x 280mm Railway Guns
	Les Alleux (Railway Battery)	2 x 280mm Railway Guns
	Hydrequent-Le Carre de Marbee	1 x 280mm Railway Gun
	Wimereux-Les Oies	2 x 280mm Railway Guns

When a British investigation team visited Hydrequent in November 1944 they found two railway turntables but no guns. Quarry staff said that the gun had been moved on September 3 — two days before the Canadians arrived. This is the entrance to one of the three ammunition tunnels cut into the rock-face; *left* as it was in 1944 and *right* when we photographed it in 1974.



Left: **Well known German propaganda photograph taken by OT-Kriegsberichter Maier of the Organisation Todt showpiece battery at Haringzelles (Bundesarchiv).** *Above:* **No trace of the lettering remains on the northernmost casemate Turm I, now owned by David Davies and converted into a museum of the Atlantic Wall.**

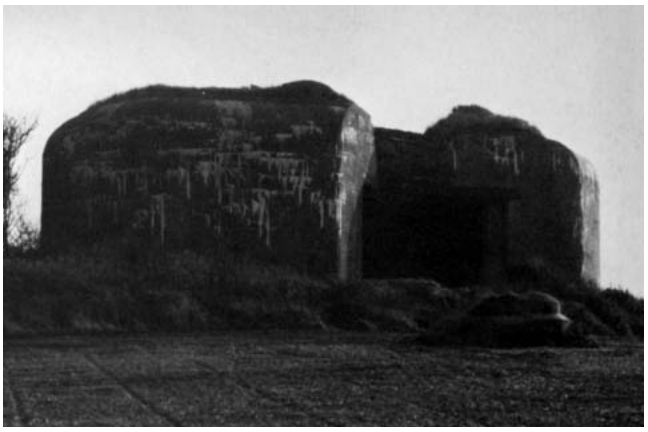
targets became the responsibility of the Naval Coast artillery and, as their battalions on the Channel coast prepared fresh plans to meet the altered circumstances, Organisation Todt moved in to construct the first of the 'second generation' emplacements.

Grand Admiral Raeder was determined that his shore batteries should be adequately protected against enemy attack and it was through his personal intervention (and undoubted 'influence at court') that the Todt engineers were able to obtain what the Army considered to be a disproportionate allocation of scarce cement for the construction of naval positions. By 1942, the Todt men had developed considerable expertise in the uses of reinforced-concrete and they moved quickly to construct the massive buildings that the Navy specified. The German gunners originally planned for a full 360-degree traverse, almost identical to those pits used at Batterie Mirus on Guernsey. However, Hitler insisted on them being fitted with massive overhead protection resulting in a restricted 120-degree arc of fire.

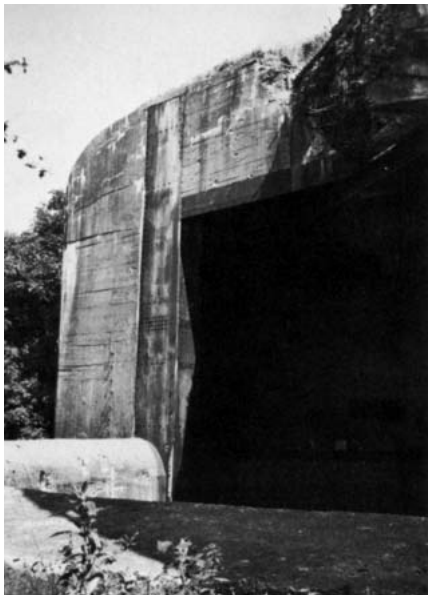
The Navy's ready acceptance of this limitation, and the subsequent siting of its guns, drew loud protests from the Army. Smarting under the injustice of a cement allocation that would leave many of their positions without overhead cover, Feldmarschal von Rundstedt's local commanders claimed that the naval guns were sited too far forward to permit defence in depth and that the Navy was contemplating using them in the manner of warship turrets. Such a lack of flexibility could only mean that the massive firepower of the naval batteries — so securely protected against enemy attack — would be lost to a local commander faced with an attack from a developed beach-head. Their protests were in vain. The guns had been sited to deal with a seaborne enemy as laid down in Directive No. 40. (It was however, technically, perhaps a far worse blunder than the much more publicised alleged mis-siting of the British big guns at Singapore.)

Coast guns in the Calais-Boulogne sector formed part of Admiral Rieve's Channel Coast Command, and were the direct responsibility of his Naval Coast Battalions. Three fortified positions in Calais itself — including the one at Grables manned by 690 Rail Battery — came under the command of the Ostend-based 204 Battalion. Six more positions in the area around Calais, three railway batteries and the prestigious long-range 406mm guns of Batterie Lindemann at Sangatte, were the responsibility of 244 Coast Battalion which had its HQ to the west of Calais at Fort Lapin. Further south, 242 Coast Battalion manned the Cap Gris-Nez guns, including eight of the eleven long-range guns that so persistently shelled the Kent coast. The coastline between the promontory and Boulogne was, with the exception of the rail guns at Wimereux and Hydrequent (Carre de Marbee) and the three 305mm (12-inch) guns of Batterie Frederich August, generally defended by weapons of lesser range and formed part of the responsibility of 240 Coast Battalion.

In all, the Navy had a total of seventy-three guns emplaced in the twenty-four positions ranging in calibre from the four static '88s' on Boulogne breakwater to the 406mms at Sangatte, and the equally impressive 380mms (15-inch) guns installed in Batterie Todt at Haringzelles. Most of the new positions were of the familiar casemated type and on a scale in keeping with the weapons that they housed, yet two of the most impressive — each involving the use of 14,400 cubic metres of concrete — were completed within ten weeks of the first Organisation Todt men arriving on site.



Four 380mm Siegfried K (E) naval-type guns were mounted at Batterie Todt which was inaugurated in the presence of Grand Admirals Raeder and Doenitz on February 10, 1942. The Siegfried project was given to Krupp in 1939 as a navy project but converted to army use mainly as a railway gun. One of its important features was that the barrels could be re-lined with new sleeves from the muzzle end in situ obviating the time-consuming barrel-changing routine. In the picture *(left),* of Turm III, the end of the sleeve is clearly visible (IWM). The 64ft 5in barrel weighed just over 103 tons and could fire either a 1,091lb shell 34.6 miles or one weighing 1,764lbs a distance of 33 miles. Maximum elevation was 45 degrees and the Germans claimed great accuracy with the weapon — the accuracy zone at six miles range being only plus or minus 112 yards in depth. At a range of 34 miles the accuracy zone had only increased to 667 yards in depth and 71 yards in width. The lighter shell took about 33 seconds to reach Dover and the heavier an additional nine seconds at its lower muzzle velocity of 2,690 feet per second. The steel plating has been removed and the roof overhangs blown out to remove the armour plate for scrap on all the casemates. *Above:* Turm IV.



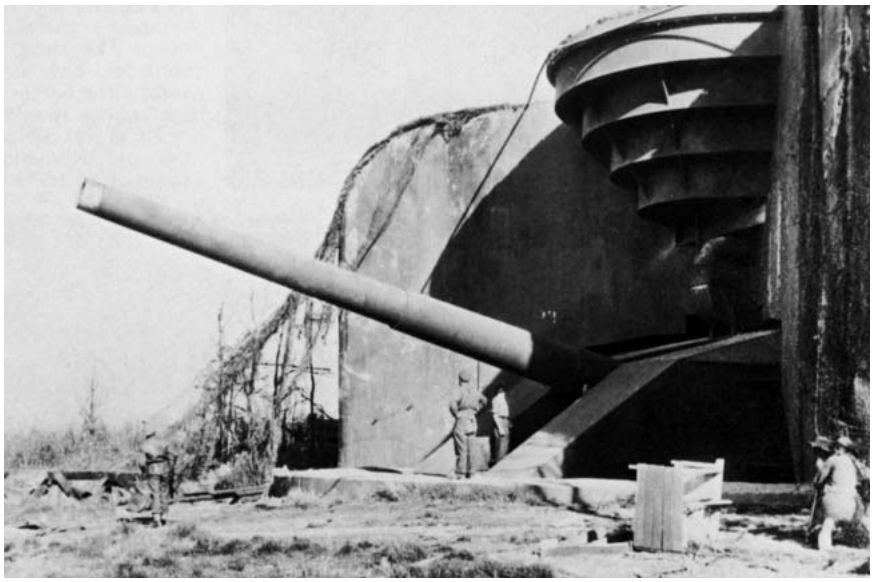
Left: **The impressions of the shuttering on the concrete clearly identify this picture (also taken by OT war correspondent Maier) as being Turm II (Bundesarchiv).** *Above:* **This casemate is now extremely overgrown and only a close view is possible today.**

One of these was Batterie Lindemann, which stood, almost contemptuously uncamouflaged, just below the 130-metre-high Noires Mottes escarpment, one mile south-west of Sangatte. Each of its 406mm guns was housed in a 60-foot diameter gun pit which formed part of the top floor of a casemated structure. Accommodation was provided for eighty-one men on the top and 'buried' intermediate floors of the positions themselves, whilst the bottom floors provided magazine storage for 250 shells and 100 cartridges per gun. Each gun pit incorporated an 11ft 6in-thick roof, similar thickness outer walls, and a floor made from a 7ft 4in-layer of reinforced concrete. The all-important Battery Command Post had 6-foot-thick walls and its vital, visual range-finder was protected beneath a roof-mounted, 3½ in-thick steel cupola.

The battery was designed to be self-supporting. In addition to the emplacements, living accommodation and command posts, its designers had provided a well-equipped hospital with an operating theatre and beds for thirty-eight patients, two pump houses and two separate reservoirs. All buildings were gas-proofed and air-conditioned and the well-equipped communications centre even boasted its own comprehensively-stocked cocktail bar! There were two reserve magazines to which ammunition could be delivered by rail but well over half of the battery's total supply was held in the ready-use magazines at the emplacements.

The battery area was strongly defended against land attack. By the time that the local defence works were complete, the entire perimeter had been protected by minefields and particularly vulnerable stretches had been provided with anti-tank ditches and 7-foot-high barriers of Element 'C' steelwork. Eighteen machine guns, nine light anti-aircraft guns and a similar number of heavier weapons were sited in open 'Tobruk'-type emplacements within the perimeter and their sub-unit command posts protected by further minefields and double-apron barbed wire. The three guns, Caesar, Bruno and Anton, were each surrounded by a separate, electrified fence and each incorporated a number of Tobruk emplacements for small-calibre weapons. To mislead would-be attackers, a dummy anti-aircraft site was constructed well outside the perimeter to the east of the main position.

The 305mm (12-inch) guns of Batteries Grosser Kurfurst (The Great Elector) occupied an equally commanding feature five



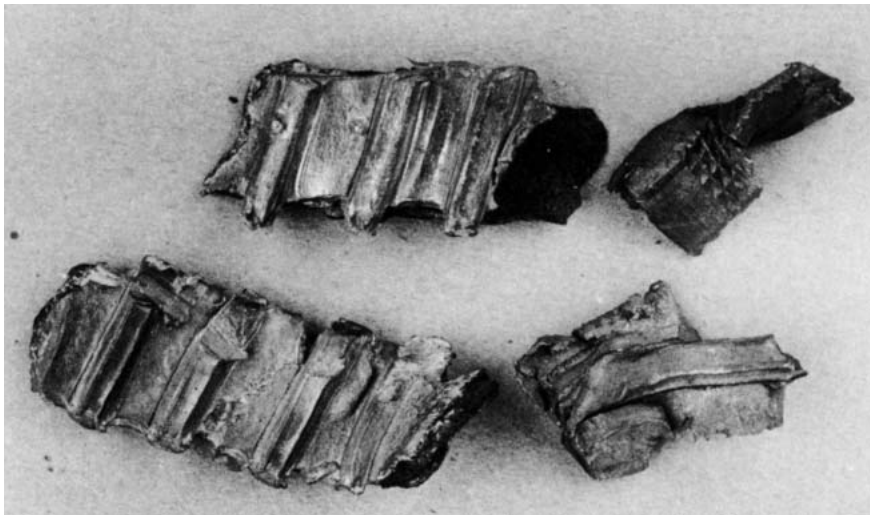
Above: **This cameraman is filming the soldier in the still picture on page 23.** *Below and overleaf:* **Shortly after its capture, two French road workers decided to explore the interior of Turm III. Using burning sticks of cordite to light the way, they somehow ignited the German cartridge store which exploded and blew the casemate apart.**

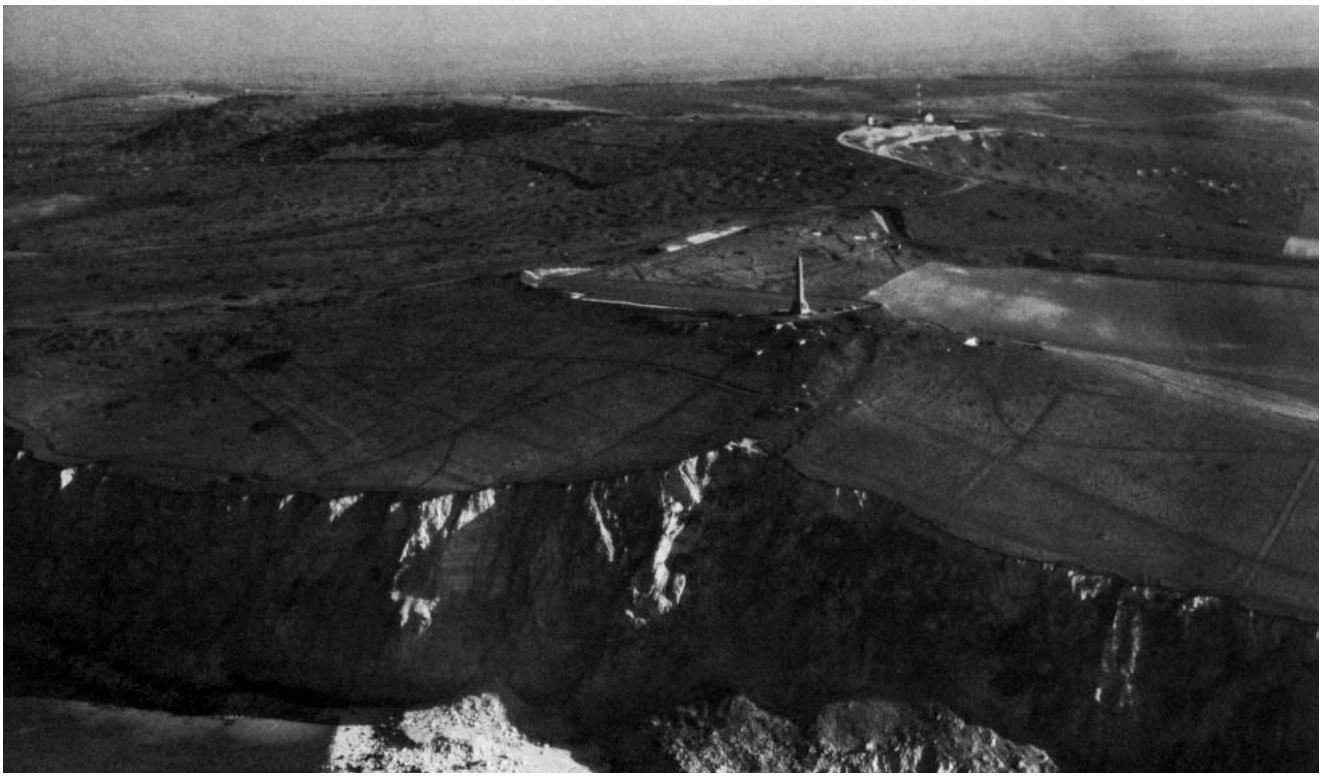
hundred yards inland from the top of the steep cliffs at Cap Gris-Nez. Unlike the Lindemann and Todt batteries, the Grosser Kurfurst guns were not casemated, being mounted instead in warship-like steel turrets on somewhat less self-contained, reinforced-concrete emplacements. The standard of protection for the crews was however by no means inferior. Each rotating 36ft x 21ft turret incorporated no less than fifty-six tons of steel plate, and boasted a thickness of up to 7½ inches of armour on its more exposed surfaces.

Although the emplacements were not spacious — being 95ft x 86ft x 17ft 4in high, comprising engine-room, ventilating room and accommodation for only six men and ready-use storage for eight rounds per gun — the advantages bestowed by the all-round field of fire far outweighed their shortcomings. The adminstrative buildings were sited at the tip of

Cap Blanc-Nez with the memorial to the British and French Marines of the WWI Dover Patrol. The monument was blown up by the Germans in 1940. Behind to the left is the Noires Mottes escarpment, pitted with the craters from the thousands of bombs and shells aimed at Batterie Lindemann on the forward slope. Unfortunately the casemates now blend into the hillside and are difficult to pick out (Skyfotos).

Left: **These 380mm shells were destined for Dover via No. 3 gun. Each measured 5ft 5ins long and had three rotating driving bands of copper followed by a thin decoppering ring (IWM).** *Above right:* **We re-enact the scene but, alas, no shells . . .** *Below:* **. . . in France that is — John Guy found these fragments from the driving bands at South Foreland Battery. Even more incredible, in 1979 a French enthusiast with a metal detector uncovered forty of the 3-foot-long brass shell cases underneath the blasted concrete of Turm III.**

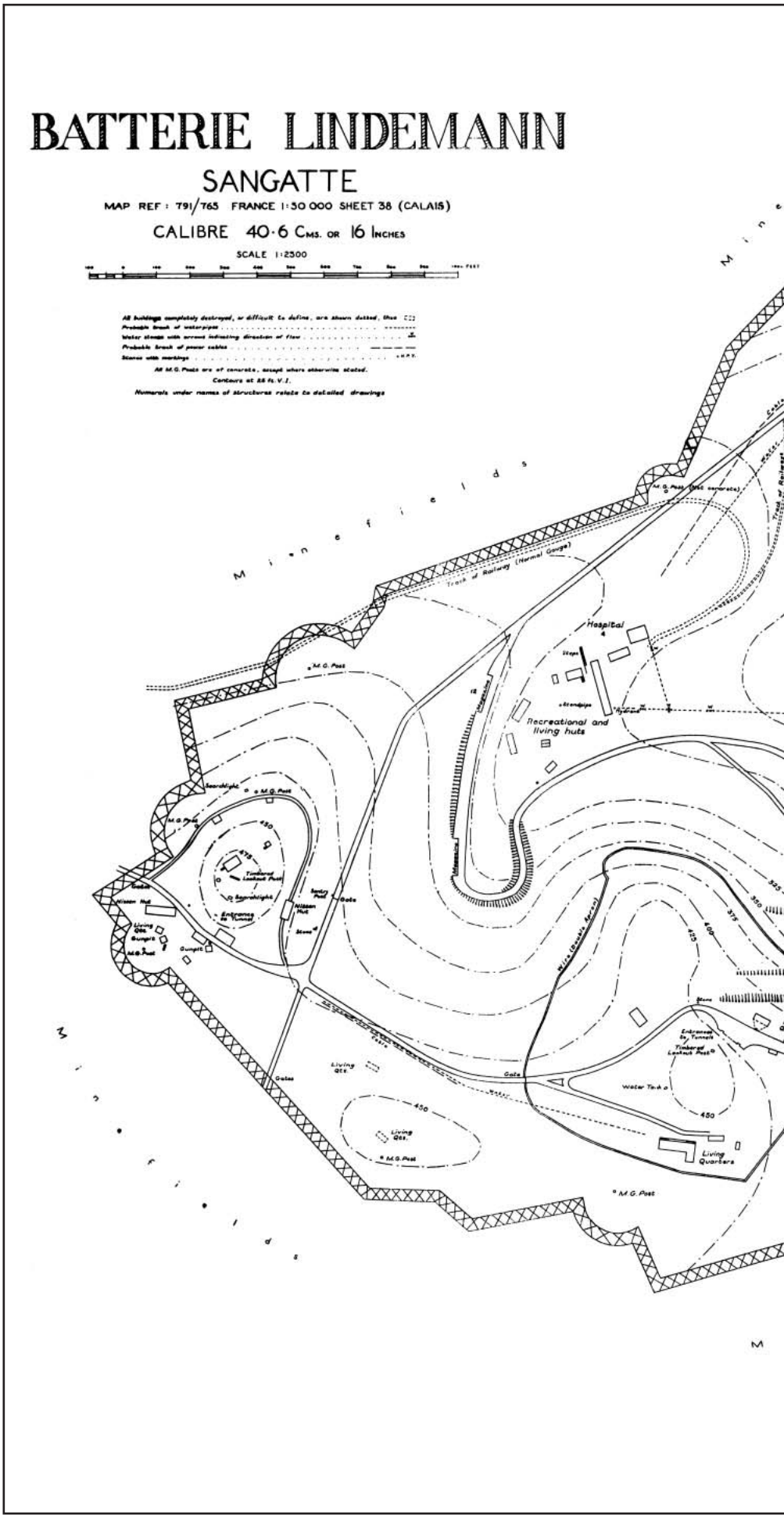




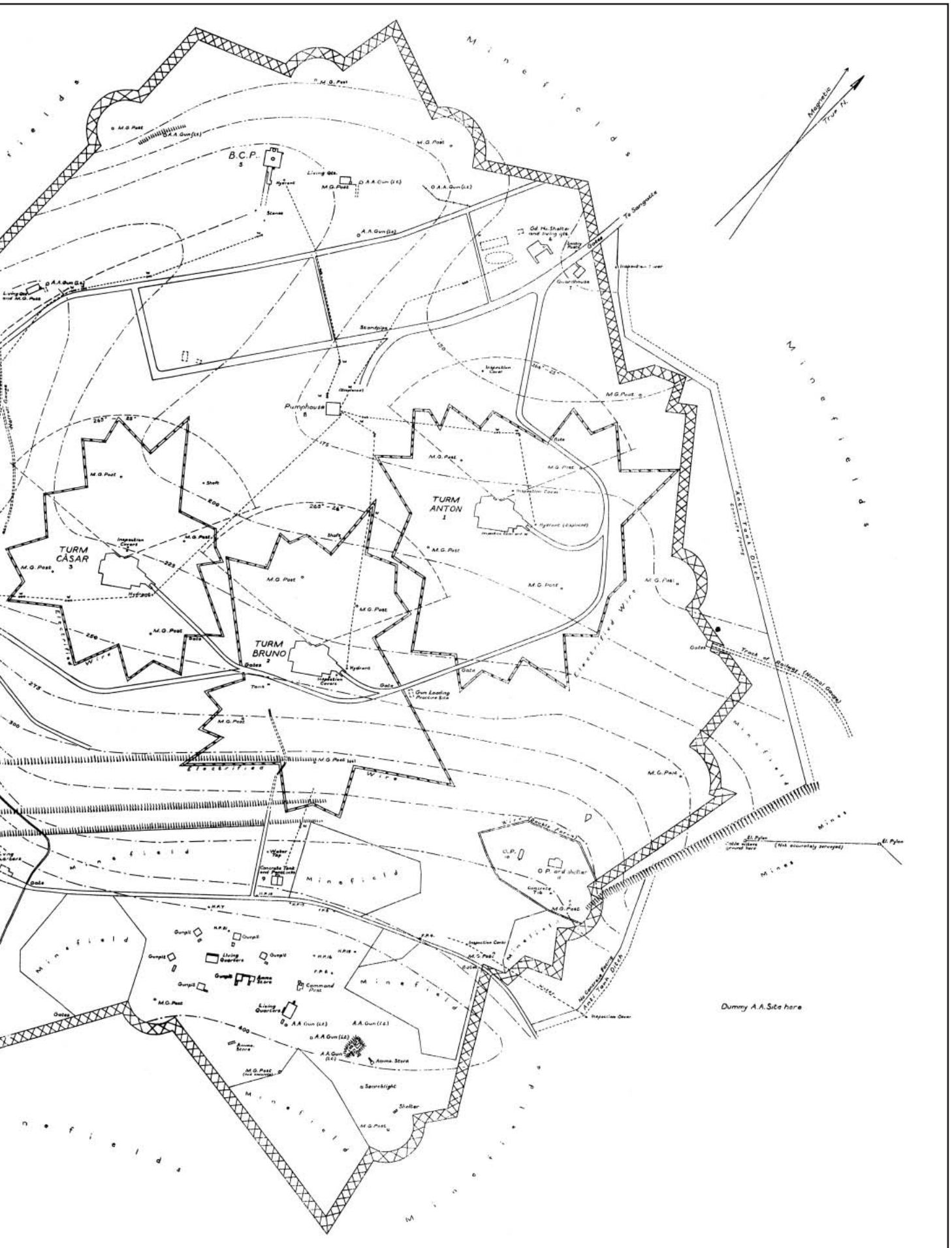
the cliff where a former lighthouse had been converted to serve as an Observation Post. Here too there was the usual well-equipped field hospital but, unlike Lindemann, where the gunners had to rely on purely visual methods of target identification, the Grosser Kurfurst men had their own Wurzburg-Riese radar installation. The four guns were sited at 300-yard intervals to the east of the village of Framzelles and were eventually partially camouflaged behind earth banks and wire nets. The defences against attack from either the seaward or landward sides were impressive. To the west, the 150-foot-high cliffs were liberally sewn with anti-personnel mines and the exposed flanks protected by 75mm anti-tank guns in fixed positions. Minefields, Element 'C', barbed-wire and anti-tank ditches were combined in various configurations to form the outer perimeter which was also provided with a number of smoke generators. Inside this outer belt, the defences were on a less formidable scale than those at Batterie Lindemann, without either electric fences or internal minefields, but, with an enemy approach possible from only one direction, the defenders had every reason to feel secure.

Life for the Pas de Calais gunners differed very little from that of those manning the opposing Dover positions. Marginally, perhaps, they enjoyed the upper hand but only because of their superior numbers and retaliatory capability. That the British had the skills necessary to dominate the Straits was amply demonstrated as the Wanstone and South Foreland batteries took a regular, if unspectacular, toll of German shipping but there was no way in which they could deter the opposing Naval gunners from exacting their revenge. Between November 1942 and D-Day, Grosser Kurfurst battery alone fired over four hundred shells at the English coast. British ammunition expenditure for the four years during which the Dover guns were in action amounted to 4,240 rounds of all calibres but this figure includes only 676 fired by the long-range guns of the Siege Regiment. The Wanstone guns fired 1,243 rounds but were only used in a counter-battery role on six occasions. Thus, whilst the British artillerymen concentrated on shipping targets, the Germans shelled the coast indiscriminately and unquestionably made life very unpleasant for the citizens of the coastal towns. In their first fifteen months in action, the German gunners fired a total of 2,450 rounds of which 1,242 were aimed directly at Channel shipping. A further 186 fell on or around the Dover gun positions and 233 in Dover itself. Some 194 shells fell away from the more obvious targets and the 593 that were aimed at the harbour installations and the vessels using them undoubtedly contributed to the mounting damage in the town.

During the early days of the battle, the British had been hopeful that they might be able to silence the Cap Gris-Nez guns by shelling or aerial bombardment but, as the war drew on, it became apparent that they could not do so and that the shelling would have to be endured until such time as the guns could be taken by an overland assault. D-Day brought no lessening of the threat and, for several weeks after the landings on the Normandy coast, the Dover coast gunners kept a deliberately low profile. In part, their silence was political — they had to avoid any suggestion that they might be engaging in pointless duelling — but primarily it was a period of 'wait and see' as the liberating armies smashed their way out of their beachhead.



Batterie Lindemann was heavily defended with an anti-tank ditch, Element C and perimeter wire and minefields. Each casemate was surrounded by an electrified fence and there were local defence guns in Tobruk-type emplacements.


B.C.P.
5
TURM ANTON
1
TURM BRUNO
2
TURM CÄSAR
3
Pumphouse
6
Magnetic
True N.
Minefield
Dummy A.A. Site here

By September 1 the pressure was on and the German garrison at Boulogne began to shed its surplus personnel in readiness for an imminent assault. It would still be some days before the leading elements of the Allied force could fight their way through to the town but, as a first step, a flotilla of small craft was assembled to evacuate those not required in the defence. The naval gunners were given the task of engaging the Dover guns and, in particular, those at South Foreland and Wanstone. Late in the evening, as the first craft slipped out of harbour, the long-range guns of Batteries Grosser Kurfurst and Todt went into action to be joined a few minutes later by the big Krupp guns of Batterie Lindemann.

First to return the German fire were the two 14-inch guns manned by the Royal Marine Siege Regiment, Winnie and Pooh. Five minutes before midnight, their crews were ordered to fire ten rounds per gun against the Cap Gris-Nez battery (Grosser Kurfurst) at a range of 39,800 yards. Months of waiting had given their crews an opportunity to practice ranging on targets on the far shore and both the 15-inch and 9.2-inch batteries had, for some time, used the wreck of the enemy freighter *Munsterland* as a 'reference point'. Ranging shots against the half-submerged hulk — one of the Wanstone guns' victims — lying off Calais at a range of 36,000yds, were followed by a relatively simple adjustment to bring the guns to bear on the German batteries.

The Wanstone and South Foreland guns soon picked up the range of the escaping small craft but, by this time, it was the 380mm guns of Batterie Todt that were most active in covering the withdrawal. The Marines had suffered several near misses when a runner from the OP arrived back at the guns with a message that they were to keep up the fire against Batterie Todt 'until it ceases fire or until you get your guns bent'. The runner was, in fact, the only means of communication left open within the regiment, for the enemy shelling had severed all of the landline links between OPs, RHQ and the guns. Winnie and Pooh kept up a steady bombardment, firing a total of twenty-nine rounds before the German batteries decided to call it a day. Both sides welcomed the pause making use of the time to repair their shattered communication and administration facilities.

The duel restarted on the afternoon of September 3 when the Lindemann guns joined those at Cap Gris-Nez and Haringzelles in the shelling of the civilian areas of Dover. The Marines were at once ordered to shoot back and, after a preliminary seven rounds at Grosser Kurfurst, switched to engage Batterie Todt. Inevitably the Todt gunners retaliated with all of the power at their disposal and turned their guns on the 15-inch positions at Wanstone causing numerous casualties and widespread damage with yet another display of well-aimed, long-range fire.

Thirty-six hours later, the Wanstone battery gained its revenge. On the night of September 4/5, the Royal Navy once again requested the coastal guns to engage the enemy batteries. Winnie and Pooh fired three rounds as ranging shots followed by seventeen aimed at their old adversaries at Batterie Todt. Whilst they were doing so Clem and Jane at Wanstone turned their attention to Batterie Lindemann where they scored a hit on the No. 2 gun Bruno. The gunners claimed it as a kill (and indeed subsequent examination revealed that the shell-burst had wrecked the big gun's power systems) but the most crippling damage was found to have been caused by the premature explosion of a shell which had blown a large chunk out of the barrel. Although the premature detonation has never been positively attributed to the Wanstone shell, the men of 540 Regiment had at last succeeded in delivering the kind of knock-out blow that had eluded gunners on

Construction of the casemate for Caesar at Batterie Lindemann (named after the captain of the Bismarck) in 1942. The 406mm guns were SK C/34 'Adolph' Kanonen of 1934 vintage. All three guns were identical except that the breach of Anton opened to the left whereas Bruno and Caesar opened to the right indicating they were designed originally for naval use. Maximum elevation was 55 degrees and all three guns fired on the same arc from 25 to 266 degrees. Four types of shell were available in two weights (1,323lbs and 2,271lbs). The former was designed for cross-Channel use and had a range of 29 miles which could be increased to 34 miles if supercharged (Bundesarchiv).

Above: **The unveiling. Construction work is still in progress on Bruno in the background (Bundesarchiv).** *Below:* **Over three decades later, the combined results of cross-Channel shelling, aerial bombing, Royal Engineers' experimental explosions and the scrap man's demolitions have left the casemates rather worse for wear.**

Above: **Anton as it was when captured on September 26, 1944. Close examination revealed only minor damage from bomb blast. Later the Royal Engineers had a field day at Batterie Lindemann experimenting with its demolition using varying-sized charges.** *Below and right:* **The result of a 7,000lb mine charge.**

Today No. 1 Casemate is a smelly repository for household refuse.

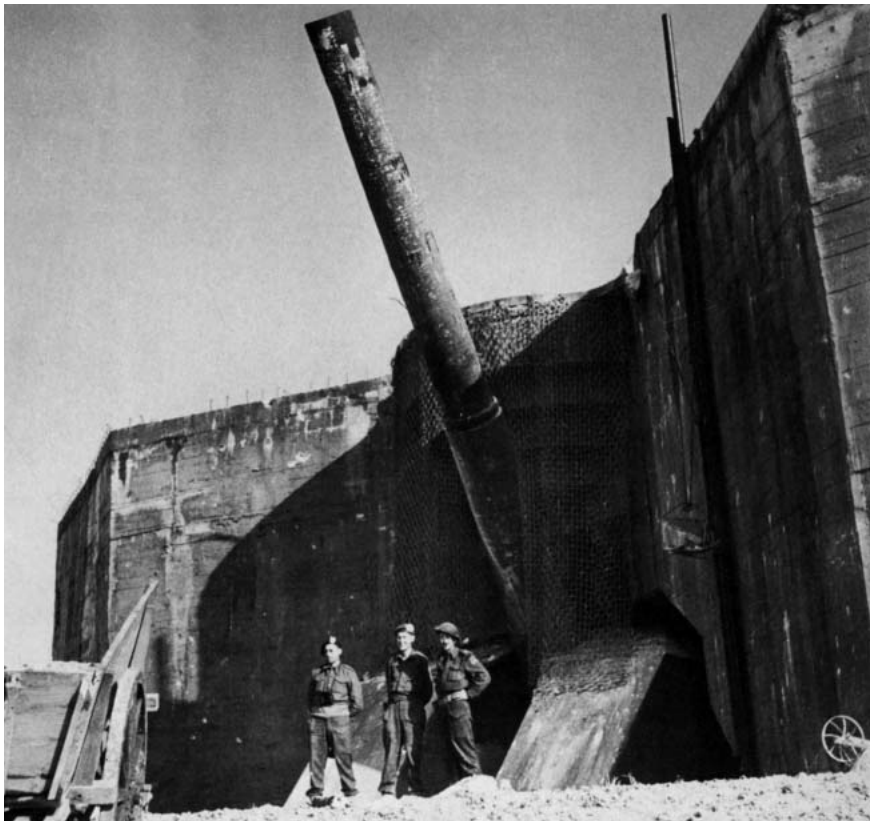
both sides of the Channel for more than four years.

On September 5, Field-Marshal Montgomery told the commander of the 1st Canadian Army, Lieutenant-General H. D. G. Crerar: 'I want Boulogne badly'. Despite the urgency, it was not a task that could be hurried, and Crerar wisely opted for a deliberate attack on the Pas de Calais in which his troops would be provided with the maximum armoured, air and artillery support.

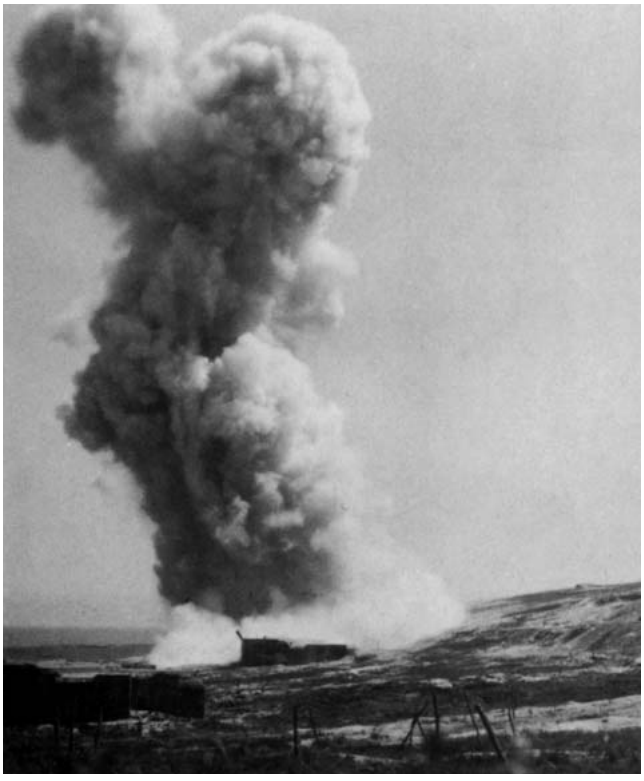
The first phase of the operations — to be carried out by 2nd Canadian Corps — commenced on September 17 when the Canadian 3rd Division, supported by 10th Armoured Regiment (Fort Garry Horse), three specialist detachments from 79th Armoured Division and the 328 manned guns of seventeen artillery regiments, opened the assault on Boulogne.

As part of the overall plan, the 7th Infantry Brigade, which had successfully isolated Cap Gris-Nez at the beginning of the month, was ordered to take the Haute Escalles feature and to silence the guns of Batterie Lindemann at Noires Mottes. The Brigade's three infantry battalions (Royal Winnipeg Rifles, Regina Rifles and 1st Canadian Scottish) were to be supported by the tanks of 6th Armoured Regiment and the guns of 12th Field and 3rd Medium Regiments, RCA, but, with doubts being freely expressed that their weapons would make little impression on the Lindemann positions, the Corps commander requested that the Dover long-range guns be integrated into the Corps fire plan in an attempt to provide urgently-needed extra muscle.

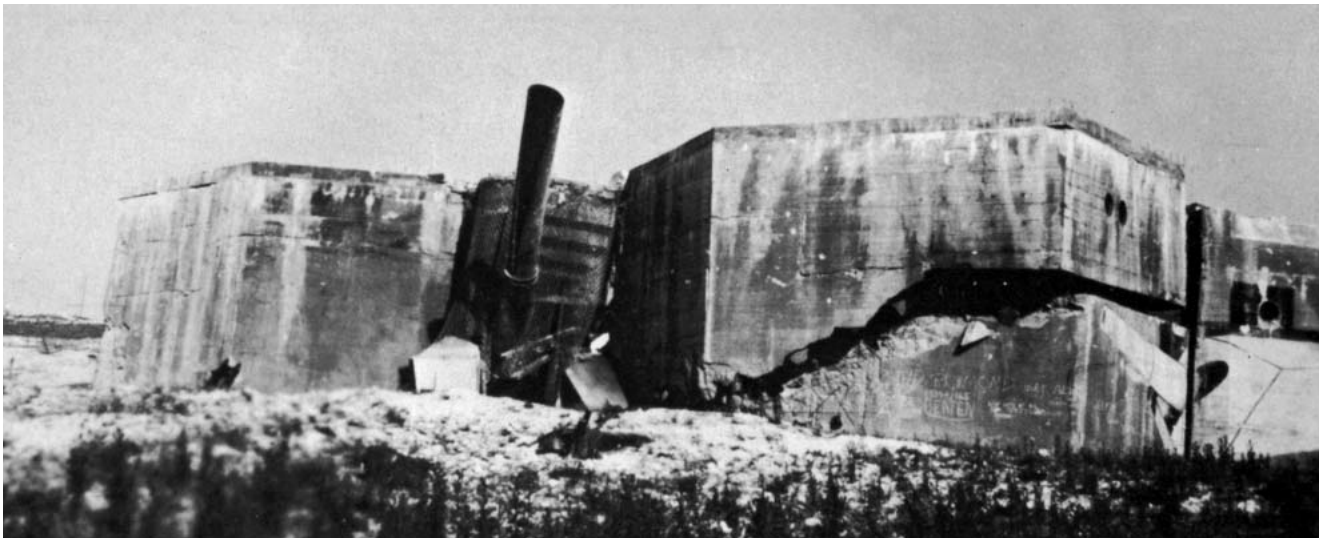
Since the beginning of September, scarcely a day had passed without the guns of Todt, Grosser Kurfurst, and Lindemann batteries shelling Dover and the nearby towns. It was a bombardment that was officially described as 'desultory' but, in three weeks, the German guns destroyed 239 dwellings and damaged 1,936 others — well over half of the total damage caused in four years of exchanges — as they carried out their orders to exhaust stocks of ammunition. Despite the shelling, the Dover guns had remained silent conserving their badly-worn barrels for the final attack on the enemy positions. Both the



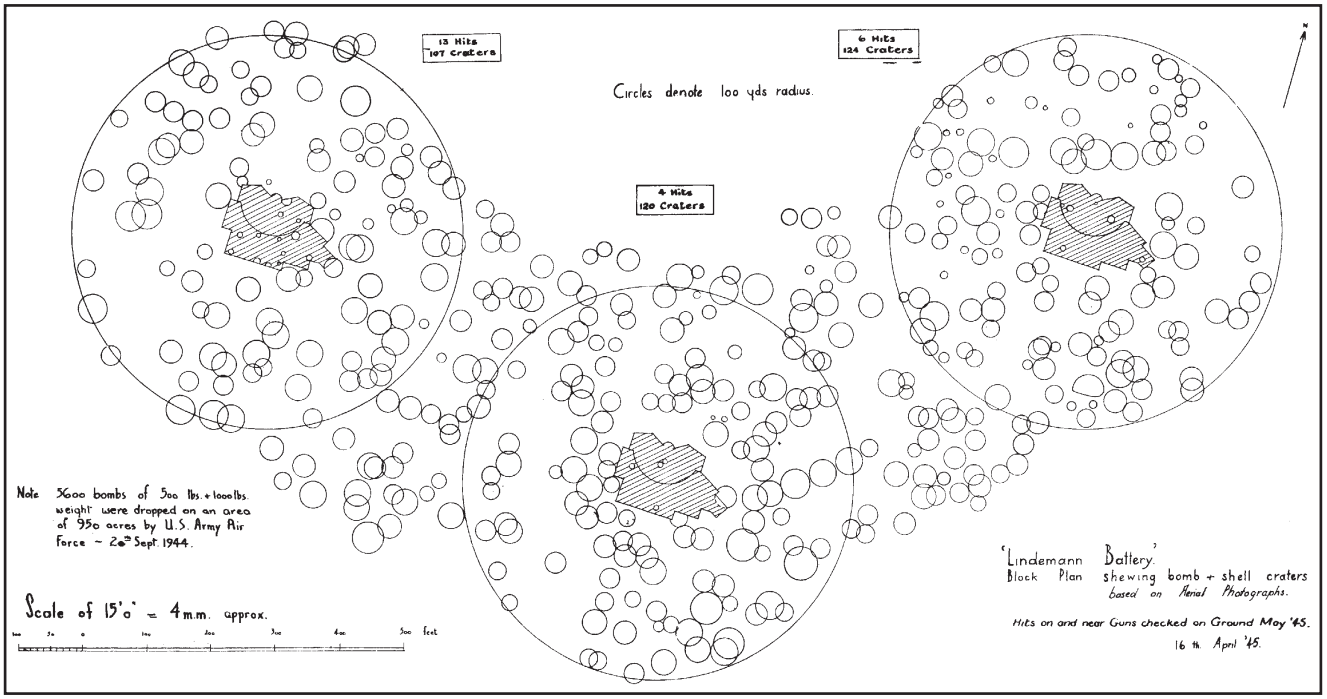
Above: **Bruno (Guns Nos. 1, 2 and 3 had names beginning with A B and C) photographed by Lieutenant Grant after capture of the battery. Lieutenant J. Wareing (believed from 8th Canadian Infantry Brigade) with Lieutenant H. A. Staples, who accepted the surrender of Bruno's gun crew, and Major O. L. Corbett — both of the North Shore Regiment. Between April and August 1945, when Batterie Lindemann was surveyed for an extensive Royal Engineer report under the direction of Lieutenant-Colonel H. H. C. Withers, DSO, No. 2 gun came under scrutiny to establish how its barrel had been blown apart. Although the Wanstone Battery wanted to claim the credit (and a large calibre shell had in fact struck the forward part of the right-hand side plate and been deflected into the gun pit where it detonated over a cable tunnel), Commander Mitchell was of the opinion that the gun had been deliberately prematured or fired against tamping. This blew off the end of the barrel which was found lying to the left front of the casemate. Also the ring cradle had fractured rear of the trunnions, allowing the gun to run back and strike the concrete in the pit.**



Left: **After the survey, the Royal Engineers exploded 2,000lbs of 808 plastic explosive in an artificial crater on the roof of Bruno. No. 3 Gun Caesar is in the foreground.** *Above:* **The explosion bodily shifted the top of the casemate — damage caused subsequently to Caesar is also noticeable in our picture.**

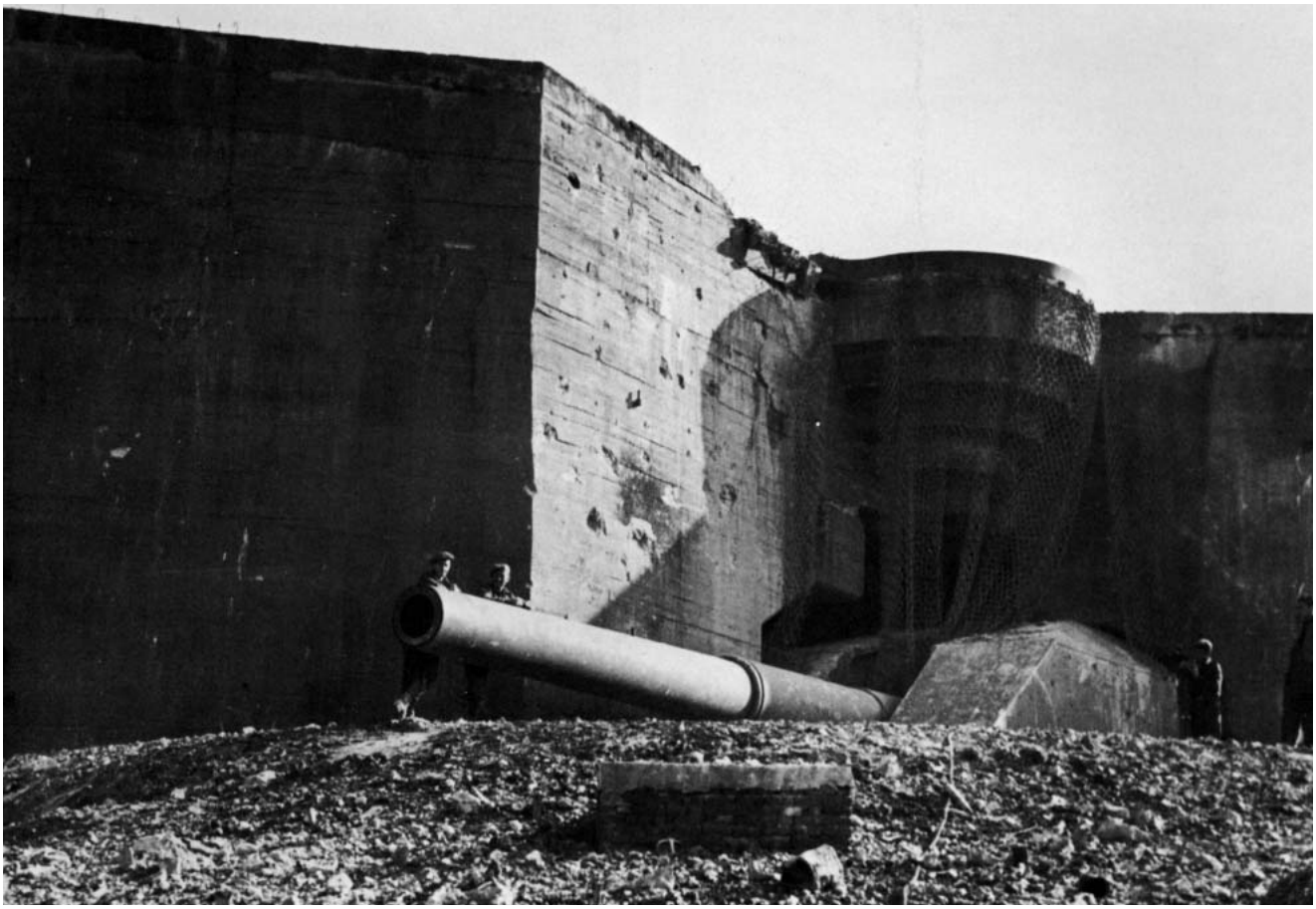


Above: **Troops of the North Shore Regiment file down the Noires Mottes escarpment, pitted with the results of the tremendous bombing of September 20, 1944. Caesar is prominent with Anton to its right. Bruno is hidden by the sweep of the hill (Public Archives of Canada).** *Bottom:* **Advancing in the footsteps of the Canadians — thirty-four years later.**

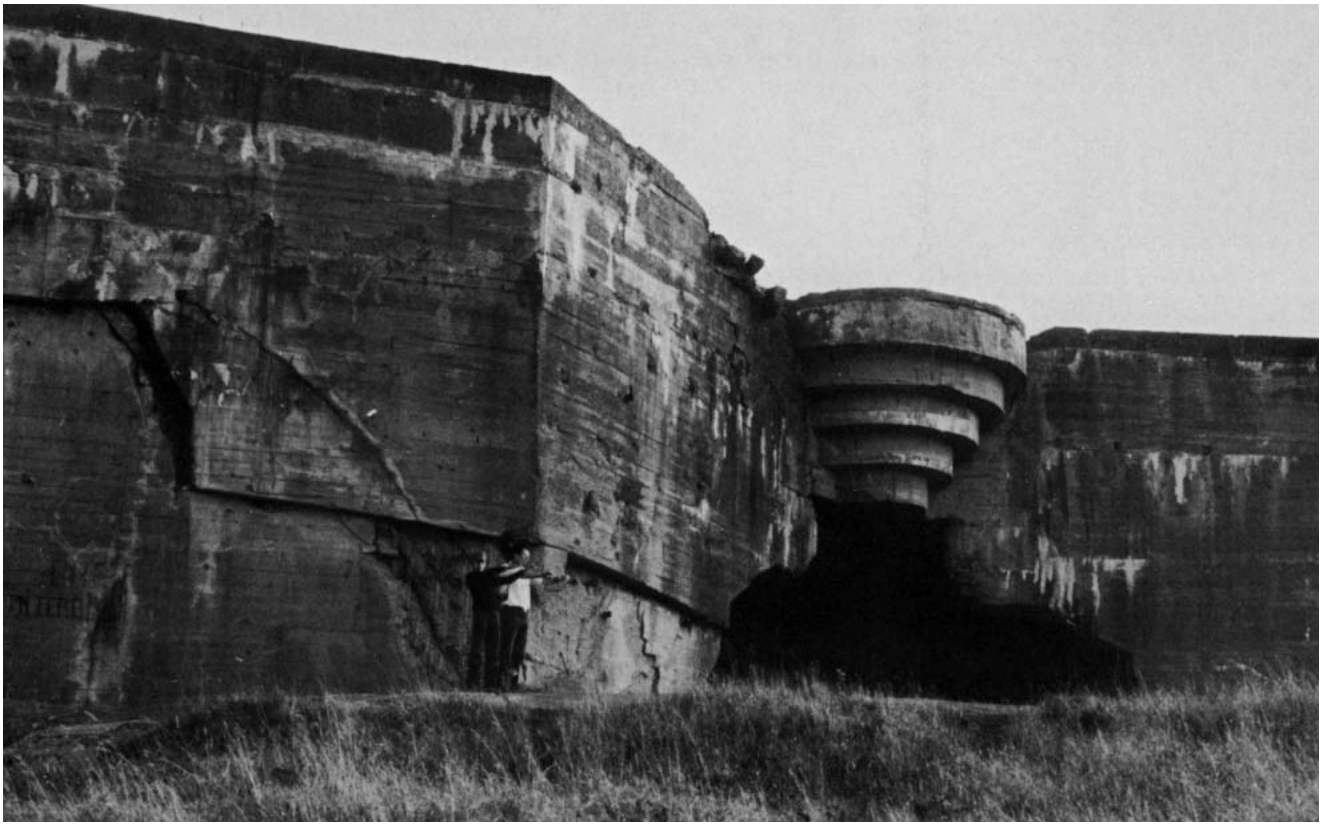

13 Hits
107 craters
6 Hits
124 Craters
Circles denote 100 yds radius.
4 Hits
120 Craters
Note 5600 bombs of 500 lbs. + 1000lbs. weight were dropped on an area of 950 acres by U.S. Army Air Force ~ 20th Sept. 1944.
Scale of 15'0" = 4m.m. approx.
'Lindemann Battery'
Block Plan shewing bomb + shell craters based on Aerial Photographs.
Hits on and near Guns checked on Ground May '45.
16 th. April '45.

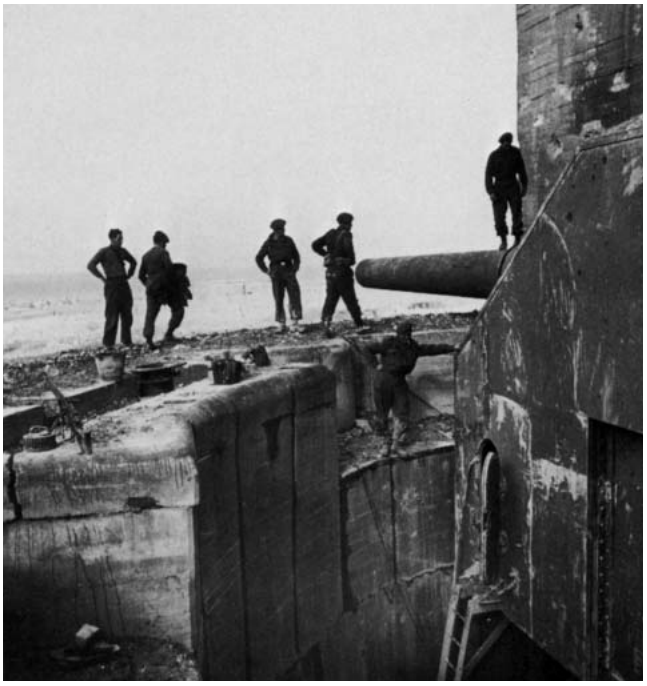
The march past Caesar — then and now. Lieutenant Grant took the shot standing on the rear corner of No. 3 Gun.

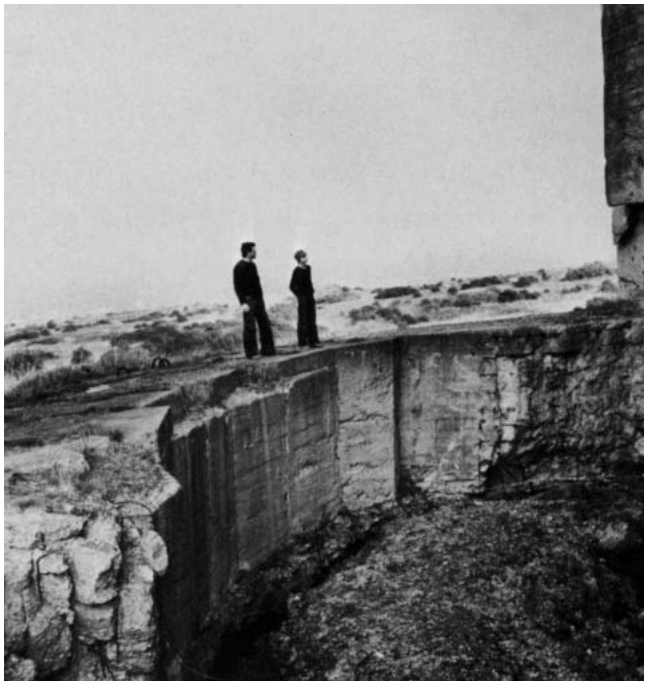
Above: The North Shore troops approach Bruno — note the queer-shaped gun painted on the casemate also visible in the photo at the top of page 33. *Below:* There is now no trace of the electrified perimeter fence . . . the elusive gun . . . or its artist!



Although firing records had been kept on the walls of each turret, these had been painted out on Nos. 1 and 2 guns. That for Caesar *(above)*, which was still in operable condition when captured, had survived and can still be seen today — see page 53. The complete record was as follows: 1942 November 9-3, 10-1, December 10-6, 11-4; 1943 February 9-1, 10-3, 14-2, March 2-1, 12-1, June 28-2, September 1-1, 4-2, 26-5, October 3-1 4-3 17-3, 25-4, November 3-2, December 4-3 23-3; 1944 January 20-7, 29-3, February 23-5 March 6-1, 12-3, 20-10, 21-4. There the record ended — a total of 84 rounds — but undoubtedly there were more in 1944 unrecorded and the total estimate is 130 for No. 3 Gun. Assuming similar numbers for the other two guns, only about 400 rounds were fired by the battery. Many hundreds of rounds were still left in the casemates and two reserve magazines on the hillside — rather ironic in view of the inscription on Anton's turret — 'We fight to the last round'.







Left: **Few regiments can claim to have captured Caesar. North Shorers examine their prize.** *Above:* **Subsequent 'works' by the REs somewhat modified the site.**

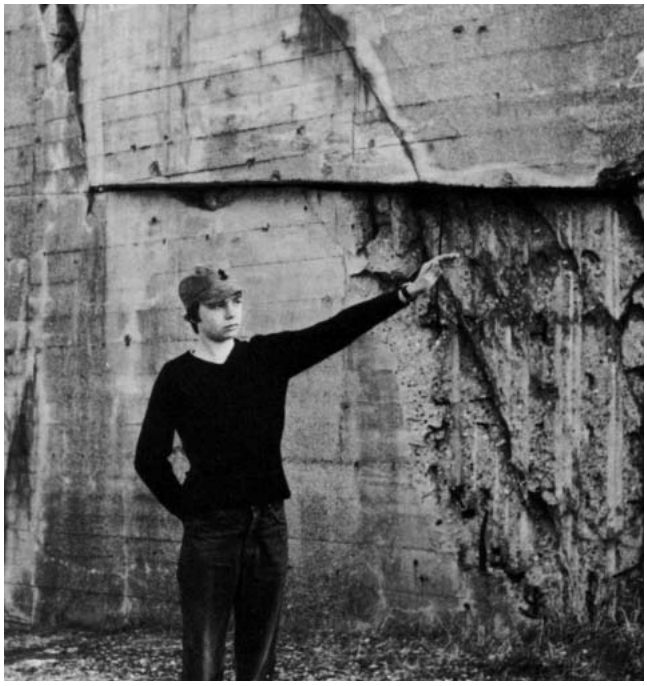
Wanstone guns were on their fourth barrels and, with life for them limited to around 150 rounds, neither gun was in shape for prolonged periods in action.

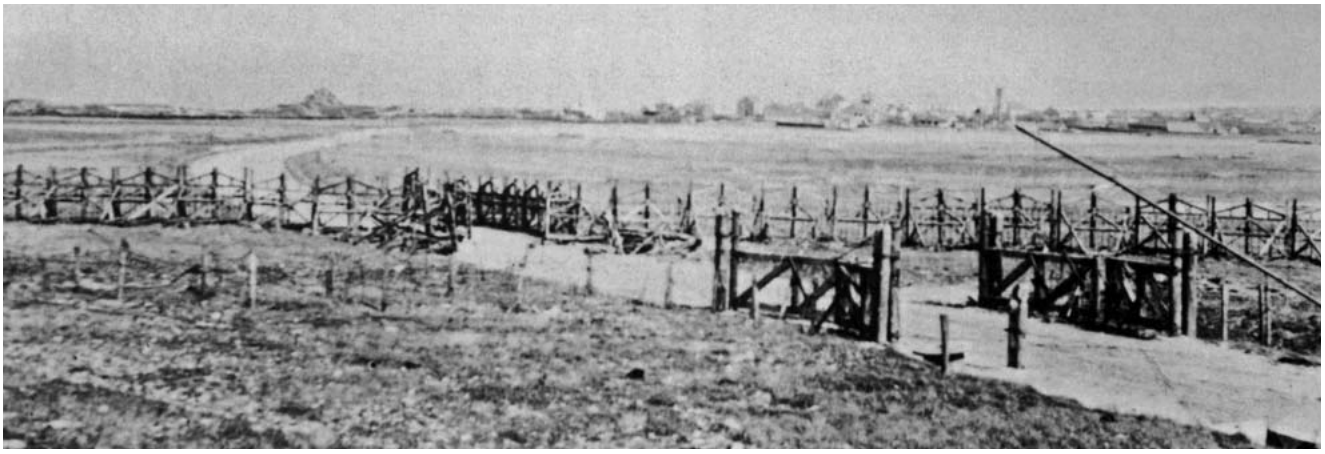
The provision of effective supporting fire for land operations demanded particularly good communications and extremely accurate spotting. Much to their delight, the gunners received an issue of wireless equipment for regimental communication and, although they still relied on landlines for their vital link to Headquarters Coastal Artillery at Dover Castle, the introduction of the new sets meant that they would be able to remain in touch with their OPs throughout the heaviest enemy shelling. Target identification and spotting had been greatly improved with the arrival of the AOP Austers of No. 660 Squadron in the frontal areas and, although direct observation was retained (using high-powered binoculars taken from the Italian warship *Littorio*), spotters were able to feed an up-to-the-minute stream of information back to Dover via a newly-opened signals channel.

The fire plan for September 17 was an ambitious one calling for one round every five minutes from each of the Dover heavies. Shortly after 9.00 a.m., the two Wanstone guns were directed against Batterie Lindemann itself and their crews ordered to concentrate on that target for a period of seventy minutes. Whilst they were so occupied, Winnie and Pooh were brought to bear on the pair of 280mm rail guns based at Sangatte which, with their all-round traverse, posed more of a threat to the Canadians than the fixed Lindemann guns. At Wanstone and St. Margaret's, hastily formed working parties of cooks and clerks kept the guns supplied with propellant as the crews achieved a rate of fire that surpassed even their most confident predictions. During the two-and-half-hour action, the batteries each fired sixty rounds and, although the enemy gunners were still very much in business, the Dover guns had made a significant contribution to the battle.

At 3.45 p.m. both batteries were ordered into action again and, after scoring a good hit on the Sangatte railway sheds, Winnie and Pooh were switched to join the Army guns in their attack on the Lindemann position. Barrel wear was now a problem for both Wanstone guns and, with shells from Clem and Jane falling well short, the time had come for them to be withdrawn. Winnie and Pooh

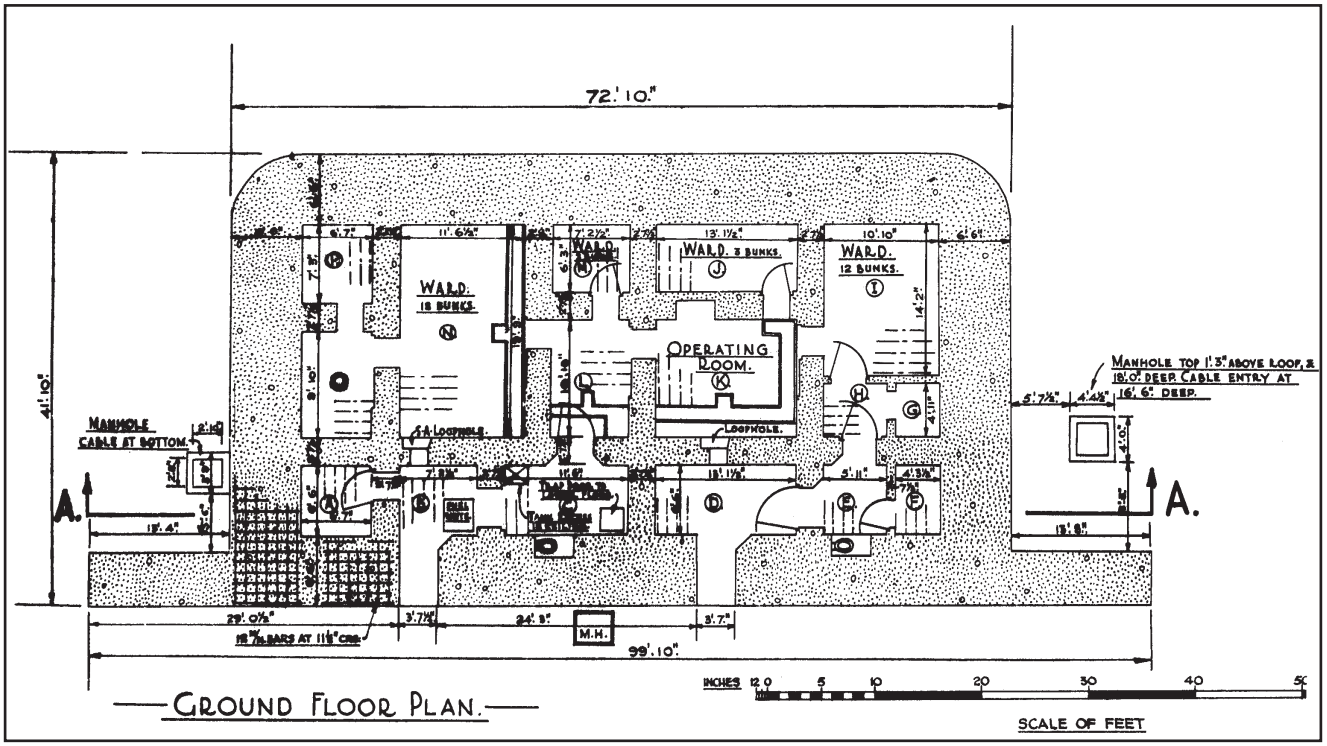
Below left: **Now famous picture taken by Lieutenant Grant on September 26, 1944 of Private C. D. Walker of Sydney Mines, Nova Scotia who shows Lieutenant M. G. Aubut how to climb into the lion's mouth (Public Archives of Canada).** *Below:* **The shutter marks on the concrete pinpoint the exact spot . . . Hail Caesar!**





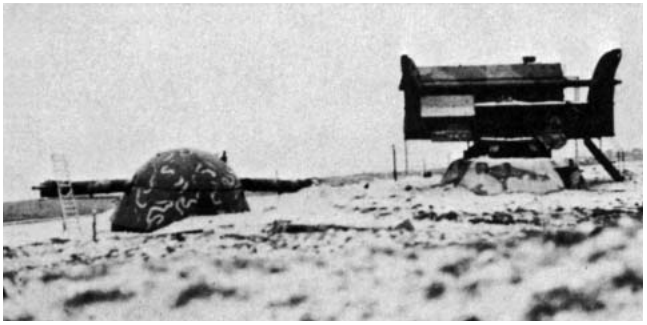
Lindemann remains largely as it was in 1945 and, in our opinion, it is one of the most interesting Second World War battlefields still to be seen today. Not only has the ground been left as it was after the battle but, in spite of the moderate post-war demolitions, there is still much left to explore. Access is unrestricted and within easy reach of Calais (a five-mile walk for the athletic). We are therefore including detailed plans of the casemates, the Battery Command Post and hospital as a helpful guide. However, it cannot be stated too often, exploring the interiors can be dangerous and our advice is never to enter alone, always have at least two good torches and to wear Wellington boots — especially important with all the broken glass around. And don't start digging. The Americans dropped nearly 6,000 bombs on the site on one day alone — no doubt some helpful reader will remind us of the quite large percentage of bombs that always failed to explode during the war! Post-war bomb and mine clearance of the area is not all that could be desired — see page 52.

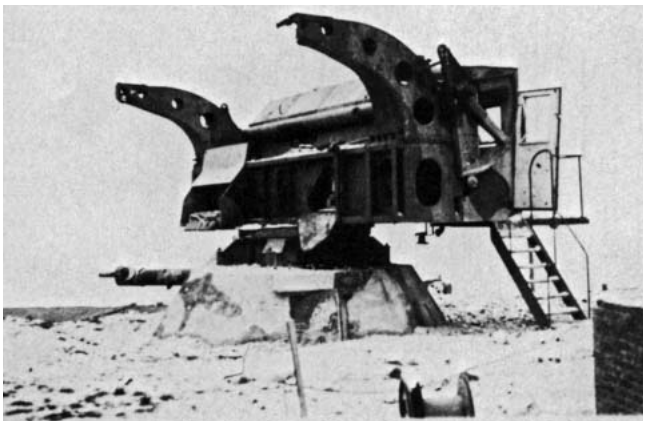
Top: This was how the entrance through the outer fence looked in 1945 (see site plan on pages 28-29). *Above:* Today the gates, anti-tank ditch and Element C fence have gone — the picture was taken from the top of the guard room shelter.

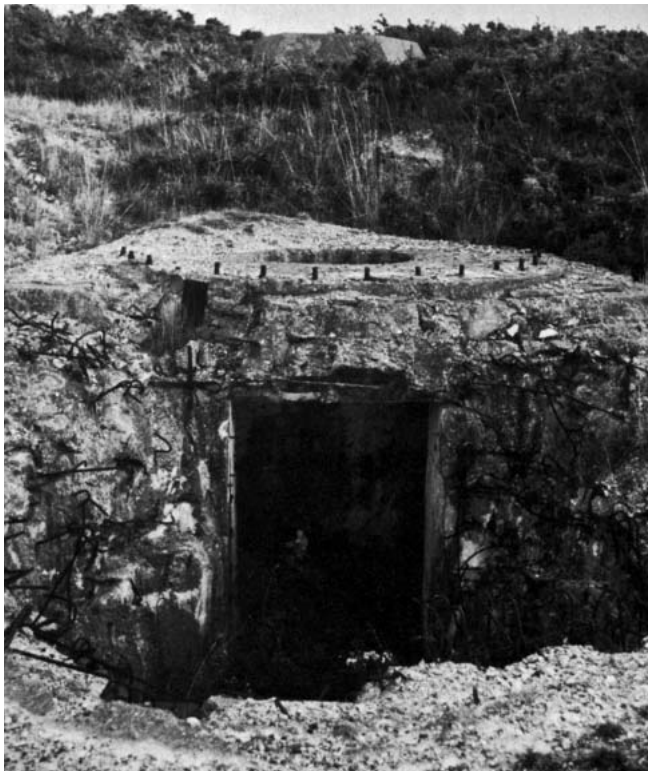


GROUND FLOOR PLAN.

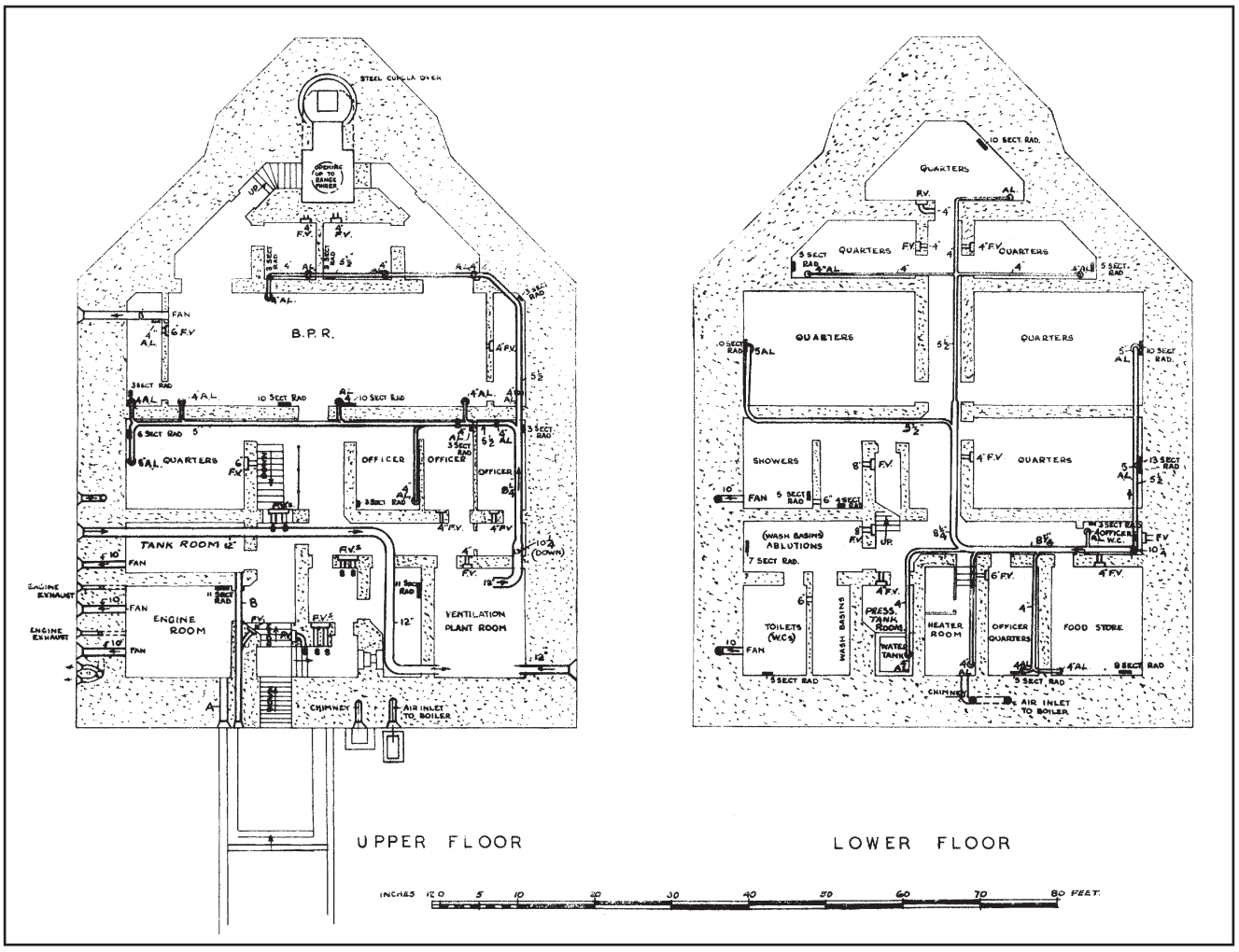
One can drive and park very near to the hospital, sited 300 yards west of Caesar, rather unusually close to the two reserve magazines. The Red Cross is still faintly visible on the concrete between the twin doors. It extends 42ft back into the hill and is 73ft wide. The walls and roof are 6ft 6in thick with a maximum cover of 15ft of earth at the rear. The ground floor contained the wards (for 35 men) and the operating theatre whilst the floor below — now flooded — once housed the ventilating equipment, fuel and water storage. Except for one hit on the roof the hospital was virtually undamaged in the battle.

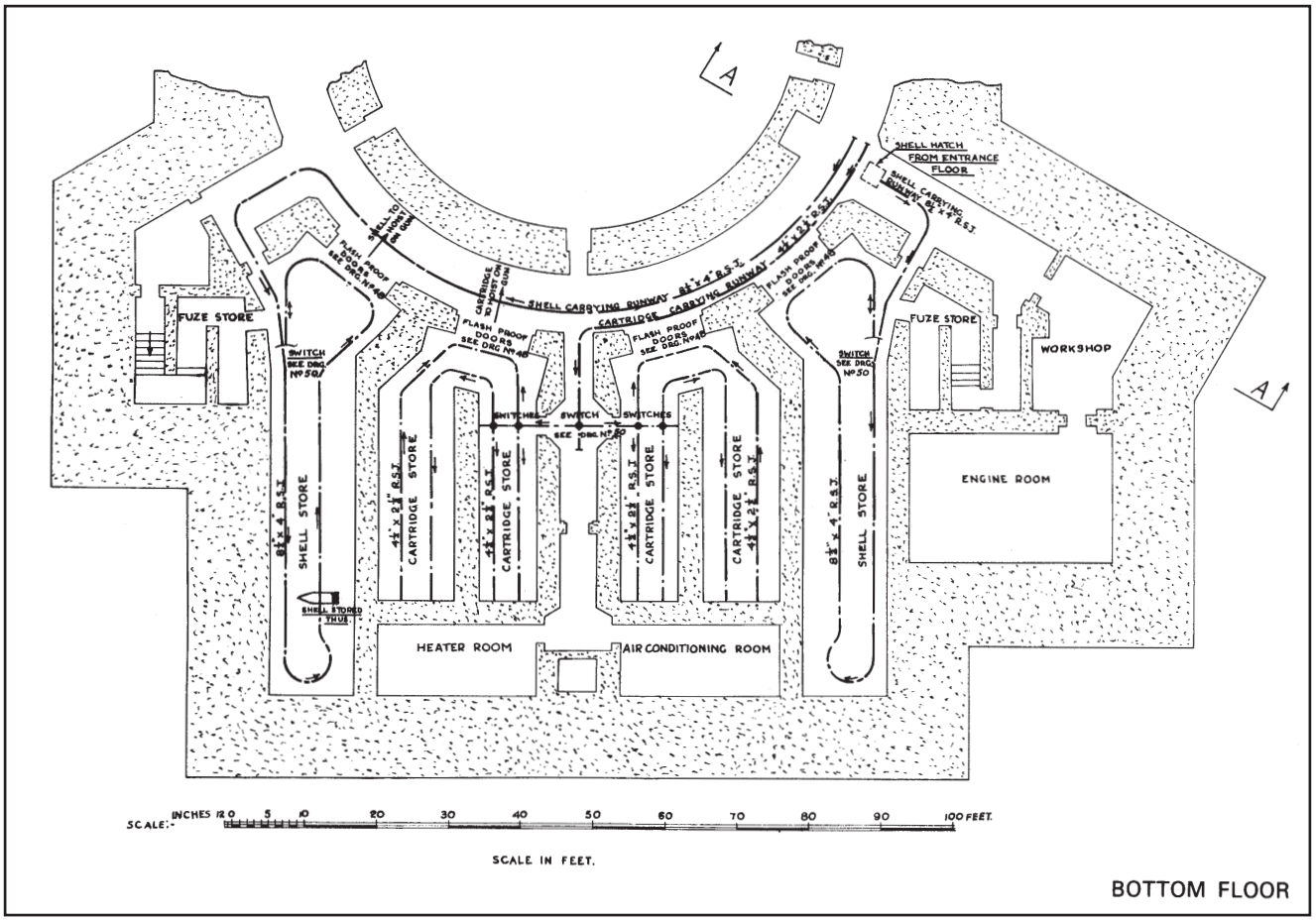




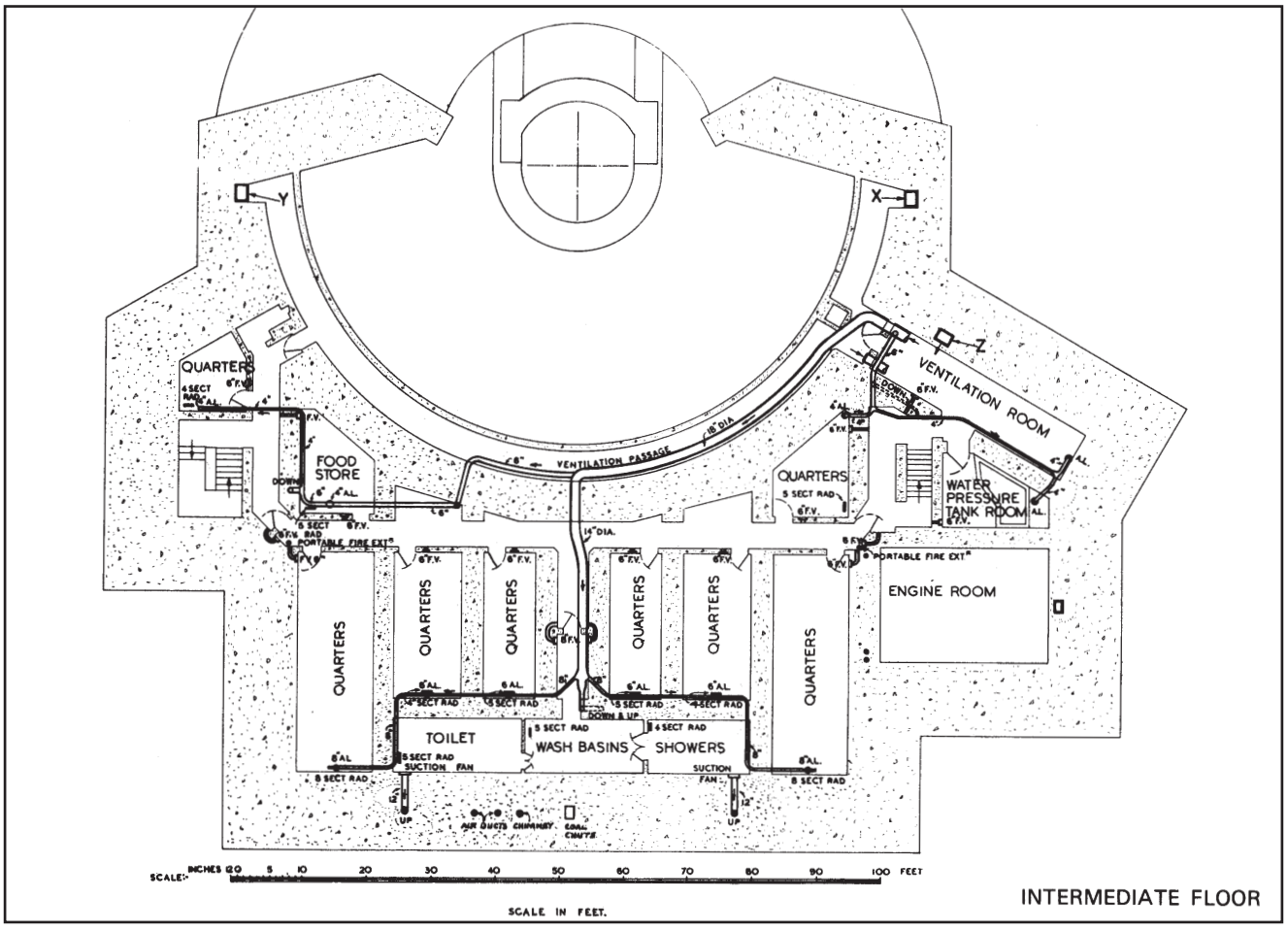


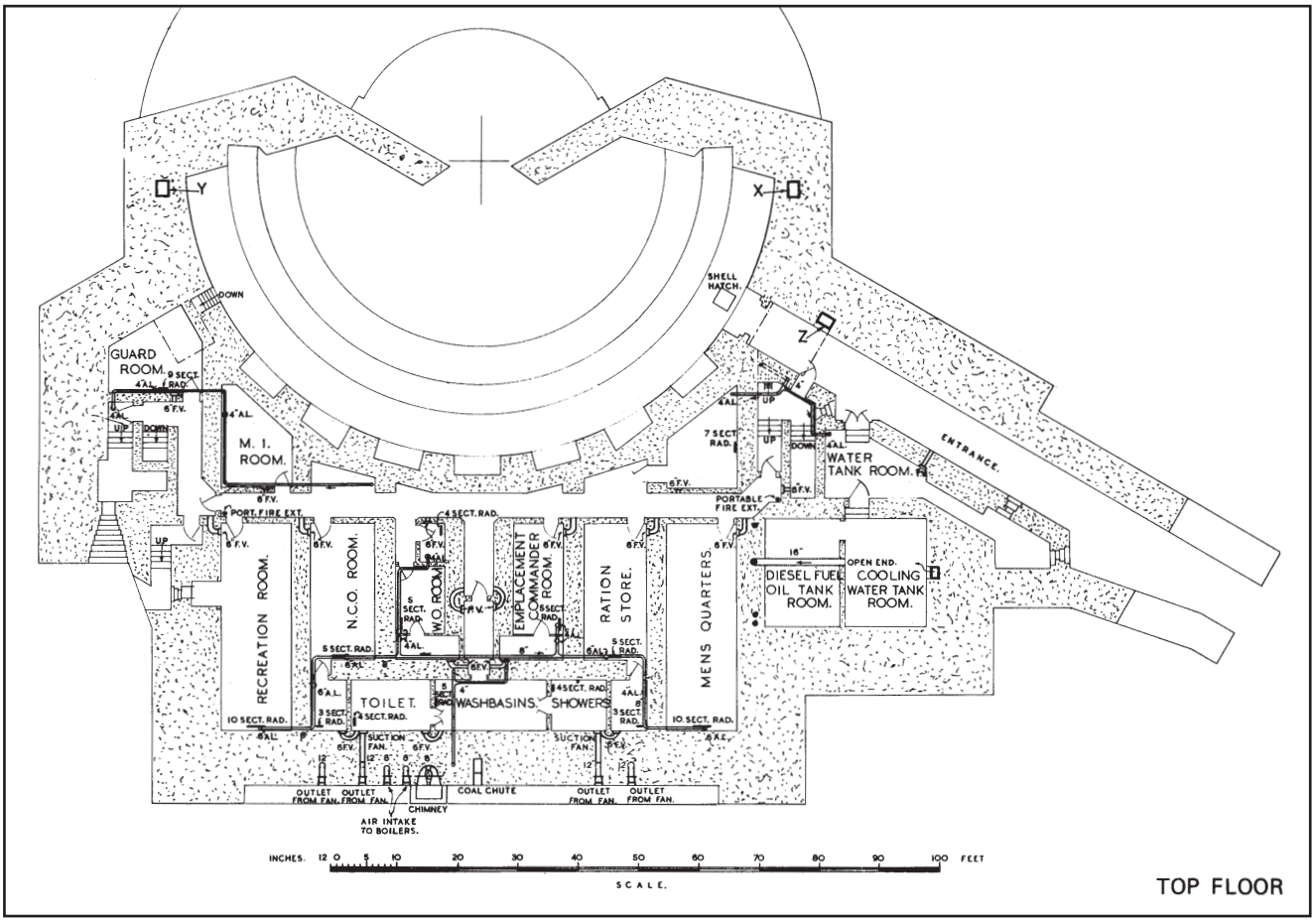
The Battery Plotting Room and Command Post — the nerve centre of the whole installation lies forward and slightly to the west flank. In its original form *(left)* it mounted a Wurzburg radar set on the roof combined with a periscope in an armoured cupola and a ten-metre visual rangefinder in a second lightly-armoured cupola. (Two other OPs were sited on the hillside to the rear of the guns.) *Right:* Great care is needed when exploring the BCP today as parts of the floor have been blown out and the rooms below are completely flooded. A small section of lightning conductor remains on the Wurzburg base.



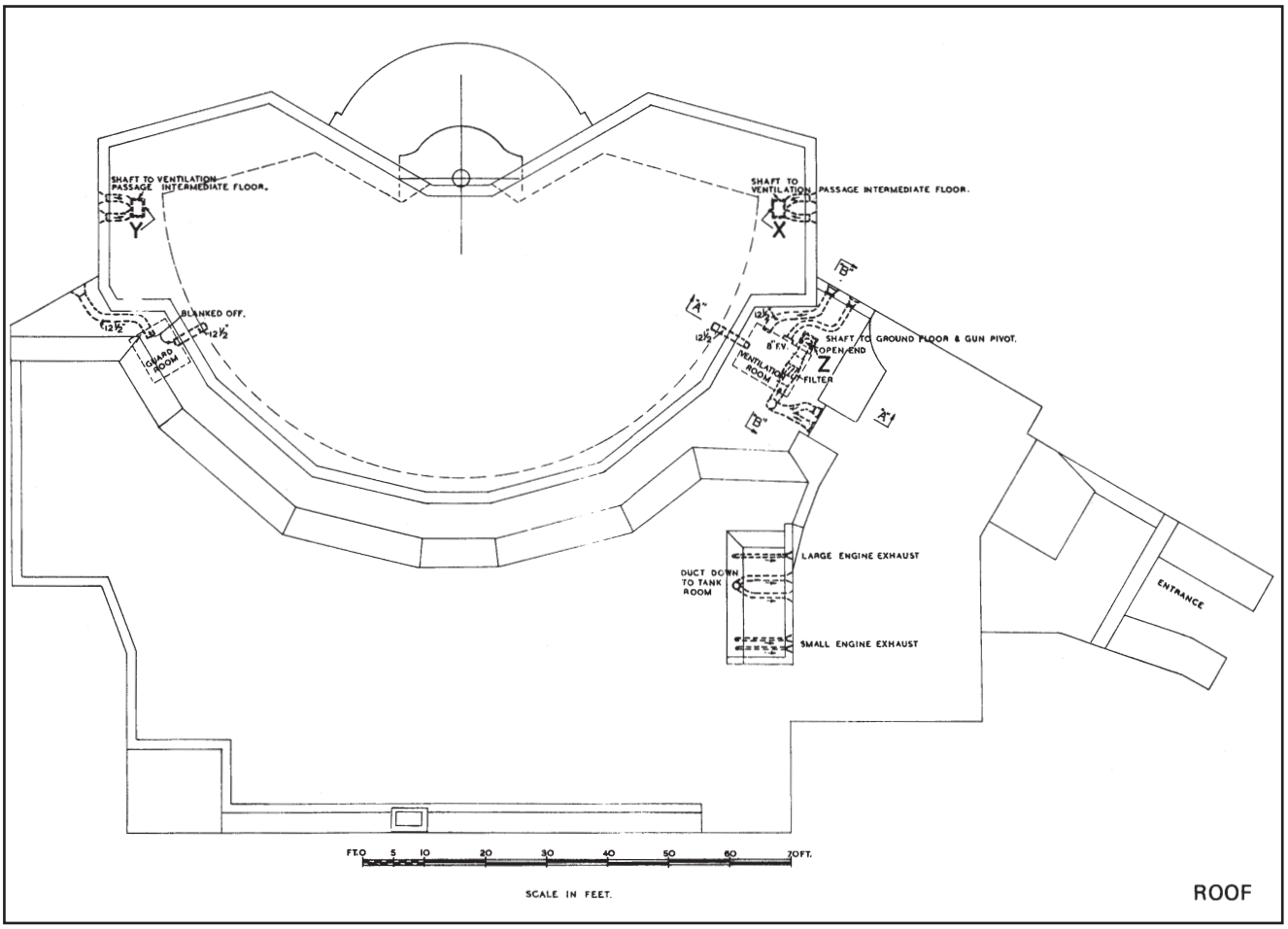


The three casemates followed a similar layout but, because of the subsequent demolitions, not all parts are accessable.





The entrance to the casemates is actually on the top floor of the construction, most of which lies below ground.



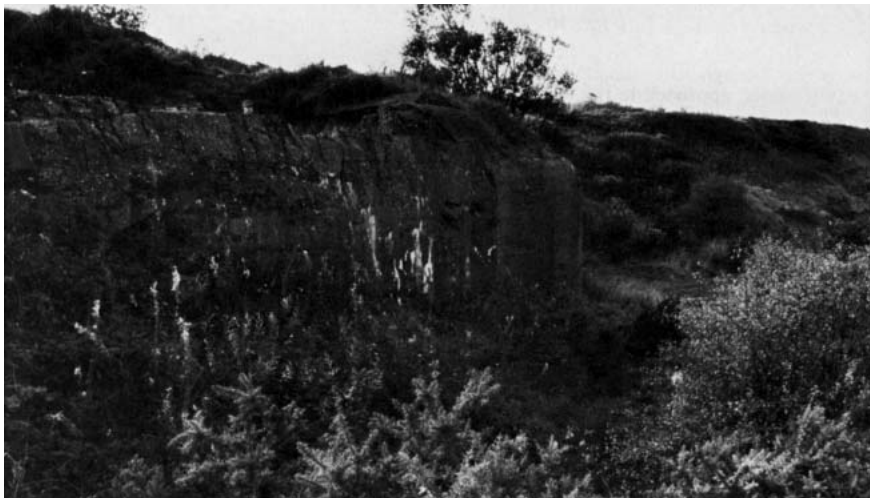
alone were now capable of hitting the target. Their crews responded to the challenge with a remarkable display of gunnery, scoring what were reported as repeated hits on No. 3 gun. However, contrary to what was believed at the time, the Marines did not put any of the German guns out of action although there can be no doubt that the psychological effect of the shelling on the already dispirited defenders must have been quite appreciable. It was a remarkable day's work for the Marine artillerymen whose efforts had all too frequently been previously decried as being of little consequence. Working well with their spotter, they had made frequent switches between targets and, in addition to their accurate shooting against the big guns, had also battered a number of field artillery and anti-aircraft positions. Inevitably, Pooh's suspect ramming mechanism failed yet again, but not before the two guns had fired a total of 114 rounds, one sixth of their total for the entire war.

The Canadian attack failed to dislodge the German defenders from Noires Mottes and, eventually, their commander decided to bypass the guns and press on northwards. Leaving the 7th Reconnaissance Regiment (17th Duke of Yorks' Royal Canadian Hussars) to contain the battered enemy, he switched 7th Infantry Brigade to the assault on Calais and requested an air strike to soften up Batterie Lindemann before his next attack.

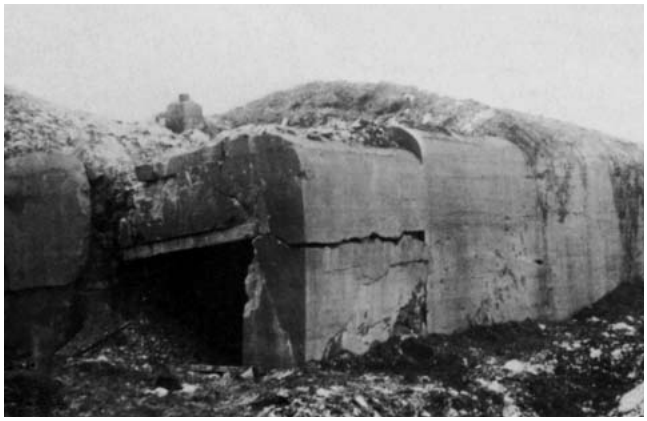
On the morning of the 19th, the Canadians decided to tighten the screw on the Cap Gris-Nez positions which had been isolated since the beginning of the month and, although they were by no means ready for a major assault, called on the Royal Marine Siege Regiment for support. After six sighting rounds, Winnie and Pooh fired sixty rounds at the Grosser Kurfurst guns and later returned to action to fire a further eight to silence a nearby anti-aircraft battery. Excessive barrel wear was by now revealing itself in some less accurate shooting and, when on the following morning the Corps commander called in the big-guns against Nebelwerfer and mortar batteries near Cap Blanc-Nez, only six shells out of the forty fired found their mark.

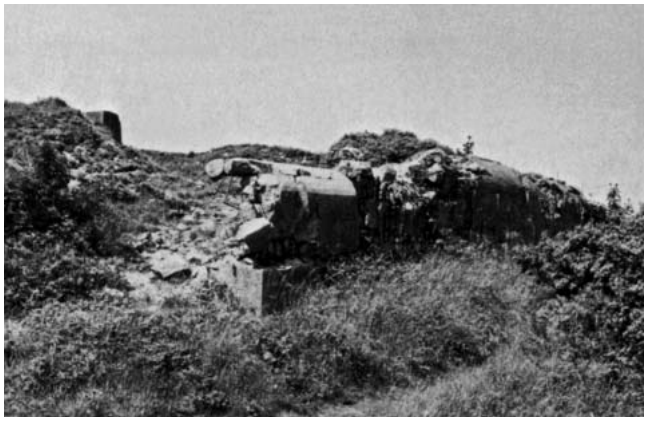
It was the end of the war for the Dover long-range guns but somehow their German counterparts still battled on. That they managed to survive the tonnage of bombs and shells hurled against them was a remarkable tribute to the Organisation Todt engineers who had constructed their positions. In the space of two hours on September 20, the Allied air forces dropped 5,600 high-explosive bombs on Batterie Lindemann alone of which 350 were later found to have fallen within a hundred yards of Caesar, Anton and Bruno. Twenty-three 500 and 1,000lb bombs actually struck the emplacements and each gun sustained several hits on its gun pit yet, so soundly were the positions constructed, all three survived the bombardment. Batterie Grosser Kurfurst too survived an attack that destroyed every light structure within its area, but, remarkably, Batterie Todt, the only battery still regularly shelling the Kentish coast, was not attacked by air.

One of the pictures the editor was especially keen to locate was that *above* reproduced in the 79th Armoured Division history. This AVRE belonged to 284 Assault Squadron, RE, and was commanded by Captain E. March. Descending the steep slope behind the battery on September 25, after it had gone about 200 yards it fell over the edge of a blockhouse. Knowing the approximate direction of the attack we looked at every concrete structure on the hillside until we discovered it was the Lindemann reserve magazine 'A' near the hospital.



On September 25, 8th Canadian Infantry Brigade (The Queens Own Regiment, The Regiment de Chaudiere, and the North Shore Regiment) began what was intended to be the final assault on Noires Mottes. Whilst Canadian Shermans, and 'Crabs' of the 1st Lothians and Border Yeomanry (79th Armoured Division) provided supporting fire, other Lothians' 'Crabs' flailed a narrow path through the minefields until they reached the outskirts of the defended area. A Churchill 'Conger' mine-clearing tank was called forward to complete the job. Meanwhile a second troop of 'Crabs' cleared a path for infantry approaching the ridge from the west. Once inside the perimeter however, the infantry came under sustained fire from the Grosser Kurfurst guns firing inland and





Left: **Magazine B as captured with one bomb hit on the roof and** *right* **as it is today after post-war demolition.**

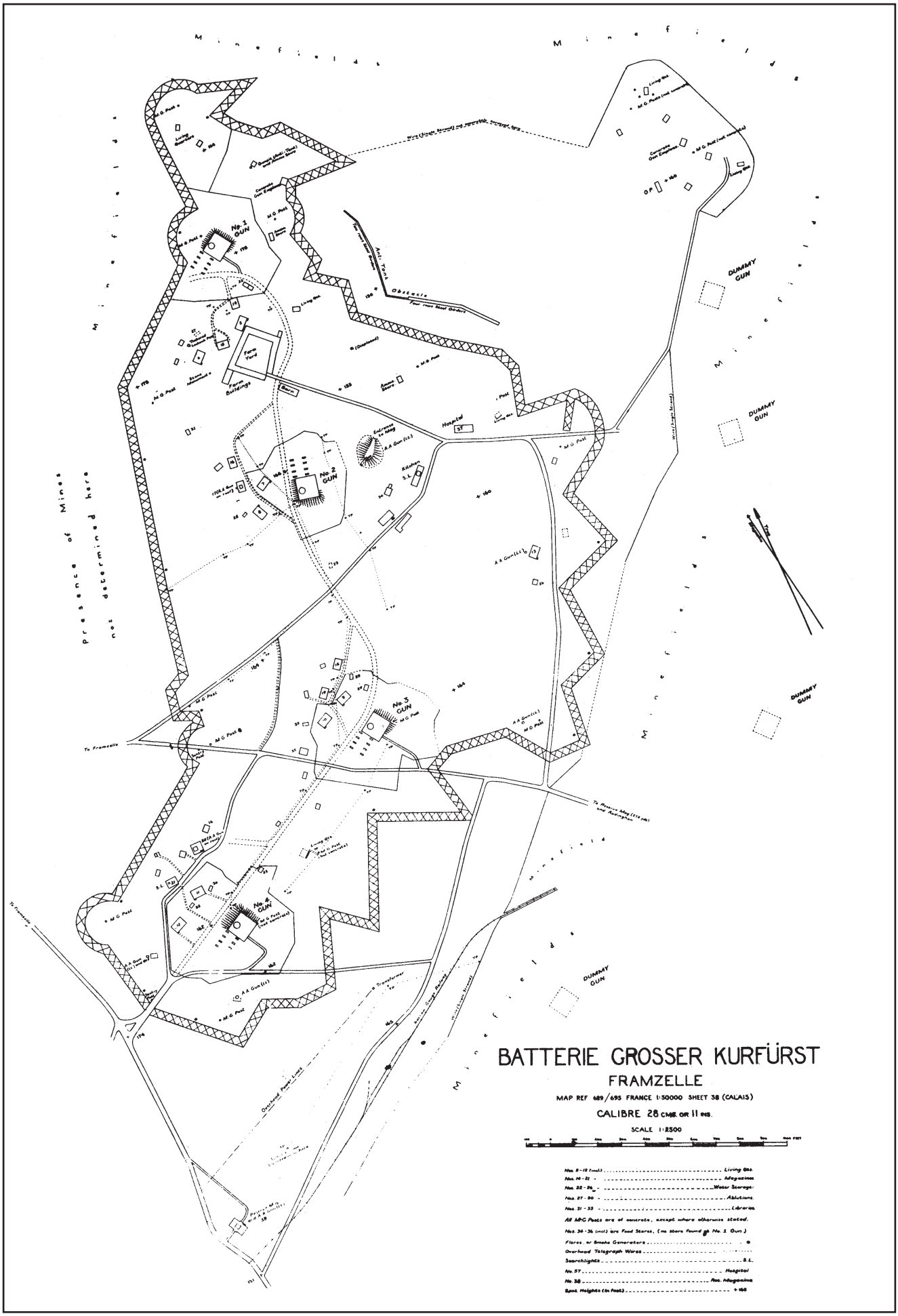
Batterie Grosser Kurfurst — The Great Elector — named after Friedrich Wilhelm (1640-1688), lay about a mile east of Cap Gris-Nez. Often called the Framzelle battery from the name of the little village nearby, it was unique amongst all the cross-Channel big guns in that the four emplacements had a 360 degree arc of fire. This was made possible by mounting standard naval turrets, running on a 22ft-diameter ball path and traversing ring, on top of a concrete casemate. This is No. 1 Gun after its capture.

progress through the deeply-cratered and heavily-mined approach to the emplacements quickly became something of a nightmare. The flame-throwing 'Crocodiles' and AVREs supporting them suffered several casualties and, with the coming of darkness, the infantrymen contented themselves with merely consolidating their earlier gains. During the night, however, the defenders lost their stomach for the battle and, on the following morning when 285 of them surrendered, many were found to be too drunk to fight.

Responsibility for the capture of Cap Gris-Nez had been given to the men of 9th Canadian Infantry Brigade and, three days later on September 29, they and their supporting armour launched simultaneous attacks against Haringzelles (Batterie Todt) Cran-aux-Oeufs (M3) and Framzelle (Grosser Kurfurst). At Haringzelles, where AVREs had engineered a fascine crossing of the River de Noirede, two out of three 'Crocodiles' in the flame-throwing troop provided by 141st Regiment, RAC, were disabled before the third was able to flame to such effect that the gunners capitulated without further ado. At Cran-aux-Oeufs, however, the tanks suffered cruelly and, after all had been disabled, it was left to the infantry to press home the final assault in the face of some very determined resistance.

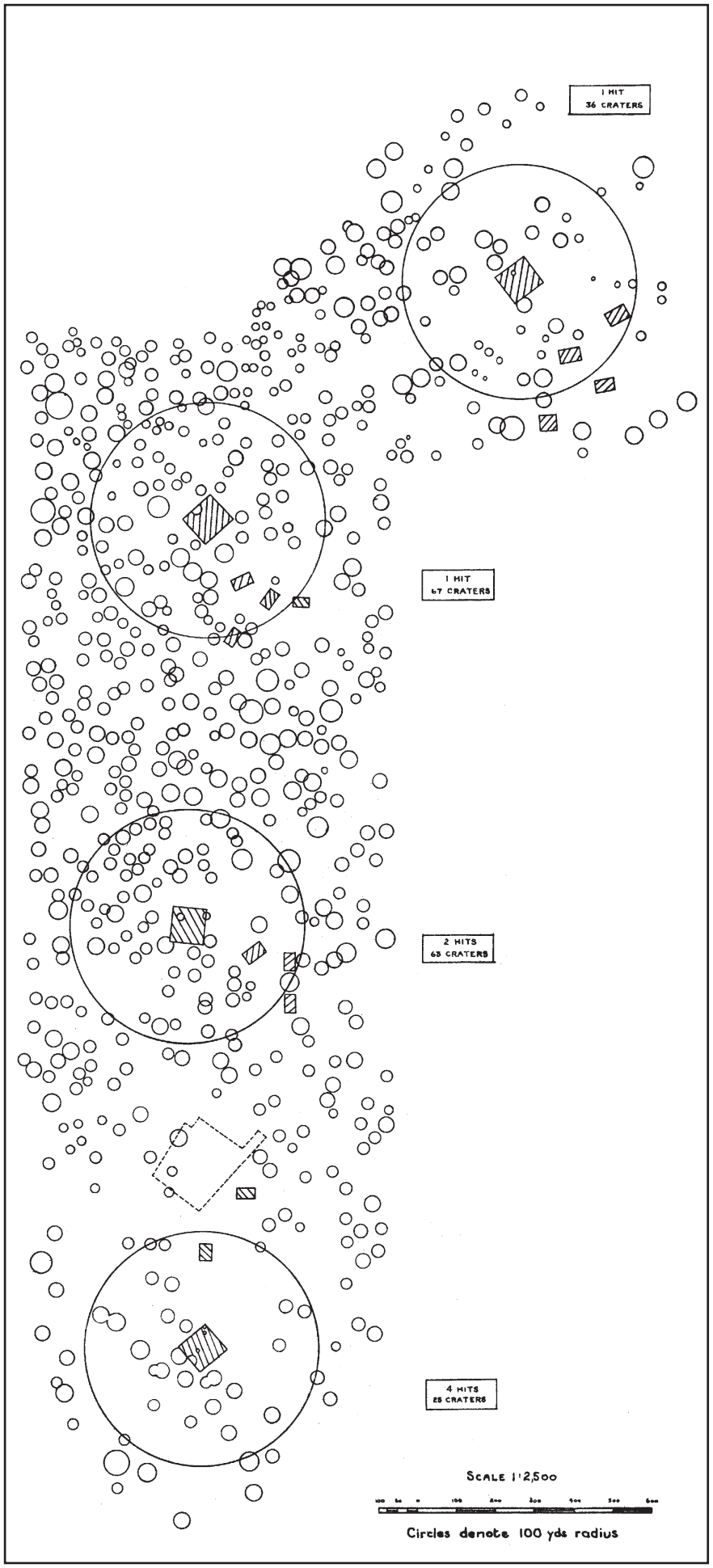
Fittingly, it was Framzelle that saw the last act in the story of the Channel guns. Once again, the Canadians made use of specialised armour to provide support in the assault and made their final approach in company with a troop of AVREs from 284 Assault Squadron, RE. Despite the loss of one of their number, the tanks successfully dealt with a number of pillboxes, before the crew of a second, disabled tank disembarked and precipitated the surrender of the naval gunners by placing a demolition charge on the roof of No. 4 turret. The defenders at the Battery Command Post fought on doggedly until they were subjected to ninety minutes' shelling by 'Crabs', Canadian Shermans, and some Sexton SP guns. A troop of 'Crocodiles' and two of AVREs flamed and blasted their way through what remained of Framzelle village and, after a spirited infantry charge on the lighthouse, the Deputy Commander formally surrendered to the officer commanding the 'Crocodile' troop.

The battery was captured on September 29 by the 9th Infantry Brigade assisted by the specialised armour of 284 Assault Squadron of the Royal Engineers. *Above:* **This is the N40 road junction leading to Cap Gris-Nez (behind cameraman)** *Below:* **Today the German blockhouse has been disguised by the construction of a small shrine.**

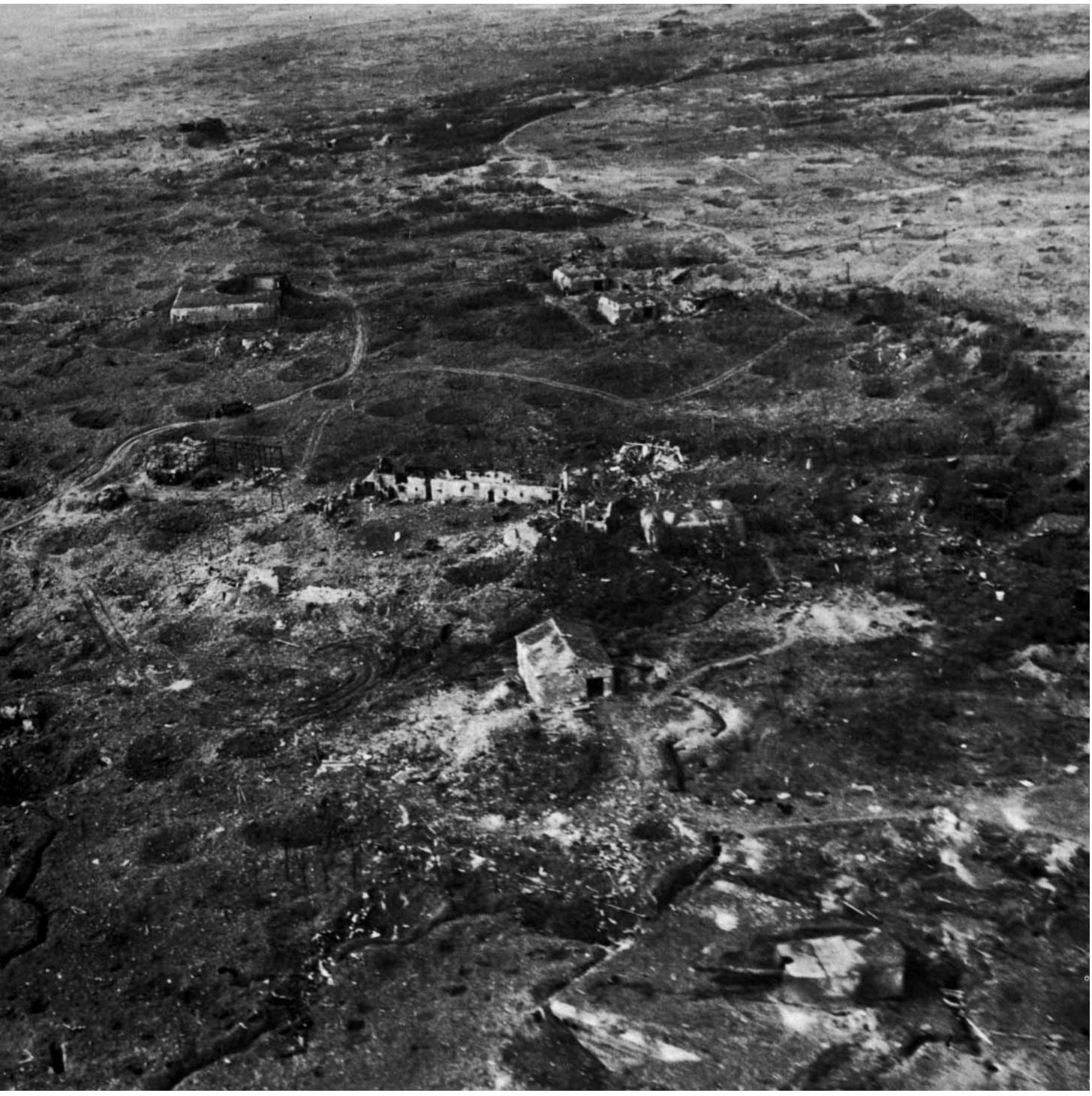

BATTERIE GROSSER KURFÜRST
FRAMZELLE
MAP REF 689/695 FRANCE 1:50000 SHEET 38 (CALAIS)
CALIBRE 28 CMS. OR 11 INS.
SCALE 1:2500
No. 1 GUN
No. 2 GUN
No. 3 GUN
No. 4 GUN
DUMMY GUN
Hospital
Barn
Farm Buildings
Farm Yard
Anti Tank Obstacle
Four rows Steel Girders
Wire (Single Strand) on Iron Stakes, Concrete Base
Minefield
presence of Mines not determined here
To Framzelle
To Reserve Mag (278 yds) from Battery
Orchard
Transformer
Searchlights
Living Qrs
Kitchen
Latrines
Ammo Store
Ammo Recess
Entrance to Bomb Proof
Overhead Telegraph Wires
Living Huts
Magazines
Water Storage
Ablutions
Libraries
All M/G Posts are of concrete, except where otherwise stated.
Flares or Smoke Generators
Searchlights
Hospital
Spot Heights (in Feet)

Above: **Grosser Kurfurst received an even greater weight of bombs than Lindemann completely obliterating all light structures in the area, communications and local defence posts. Here German Red Cross bring out a wounded man, picking their way carefully around the bomb craters (IWM).**

Below: **In spite of several direct hits, none of the four gun casemates were severely damaged. However, after the war the Royal Engineers did a grand job of demolition, blasting each casemate into the unrecognisable piles of concrete to be seen today. Both reserve magazines remain intact.**



The bomb plot on the left, produced during the Royal Engineers' survey in 1945, can be compared with the oblique *below* taken looking south in 1944. No. 1 Gun lies in the right foreground, with No. 4 almost immediately in line at the extreme top. No. 1 Gun received four hits, one bomb bursting on top of the turret *(right)*. Although it dented the 100mm armour plate and sheared the 2-inch bolts, there was no penetration. Three hits had been scored on No. 2 Gun, one bomb failing to explode, breaking in half and jamming under the tail of the turret *(far right)*. Strikes on both Nos. 3 and 4 caused only slight craters in the concrete. Amazingly, the magazines and most of the living quarters escaped direct hits. There were several near misses but the short fuzing of the bombs only made craters 7 or 8ft deep and caused no damage (IWM).



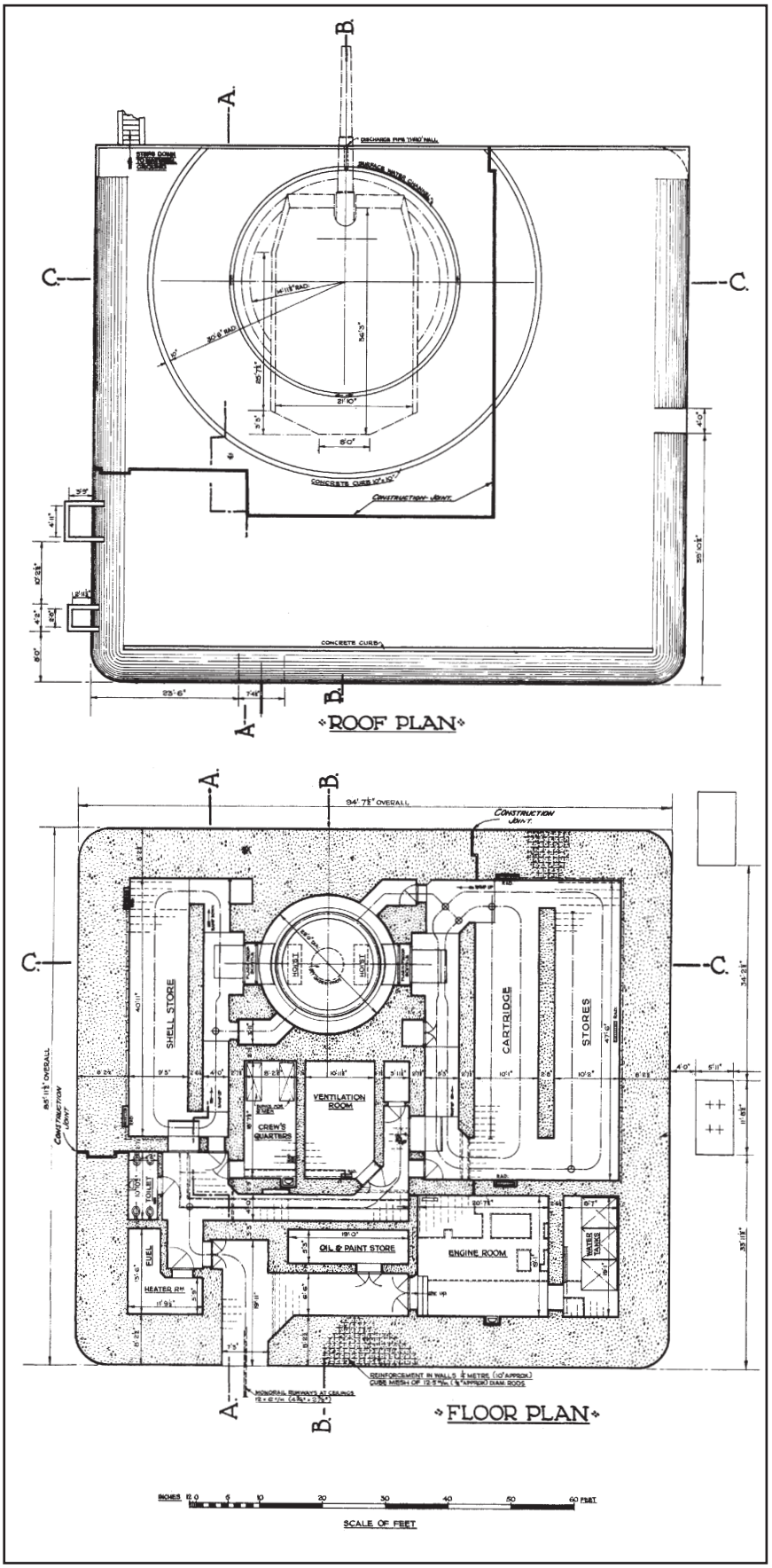
Exploration of the British and German cross-Channel heavy gun sites today is a fascinating experience although one with extreme contrasts. Whereas, as John Reed has explained, the British positions were all sited in open gun pits with no overhead or side protection, the German guns were located in heavy casemates most of which remain to be seen today although all the guns have been removed for scrap.

Assuming the visitor begins at Calais taking the N40 coast road towards Boulogne, the first big gun site to be reached is Batterie Lindemann. This lies about half-a-mile inland to the left of the road just past Sangatte. The three, well-weathered concrete casemates now blend into the hillside but as Anton is now used as a rubbish tip, a negotiable track still leads up to the site. The casemate for Anton was nearly half-filled with rotting household refuse when we visited the area in November 1978 and, after taking our comparison pictures, we quickly drove further up the track for the cleaner air of 'Turm Bruno'. There we explored the underground tunnels beneath the casemate still in a remarkable state of repair. However the casemate itself is badly shattered from a demolition charge fired on its roof after it was captured. Most of the propaganda photography, both German and Canadian, seems to have centered on the westernmost casemate Caesar which would have been the first to have been reached by the North Shore Regiment descending from the escarpment behind. We retraced the route of these soldiers down the hillside, still heavily cratered from the bombing and shelling. En route we found the location where the 248 Squadron AVRE fell from the top of the blockhouse depicted in the invaluable unit history 'Story of the 79th Armoured Division', our well-thumbed copy managing to survive all the clambering about the hillside.

Motoring a further ten miles south along the N40 brings one to the D191 turning leading to Cap Gris-Nez. From the ground, Batterie Grosser Kurfurst is disappointing as the steel turrets have been removed and the concrete casemates all blown up. No. 1 Casemate is sited on land belonging to La Renaissance Co-operative farm and the rubble of all four casemates is very much overgrown.

Batterie Todt is located at Haringzelles, right beside the coast road; it is impossible to miss and a visit is most rewarding for several reasons. Readers of 'After the Battle' No. 23 will have been introduced to David Davies who raised the Crusier tank from the beach near Dunkirk in 1978. M. Davies took over his father's Hotel Normandie in Wissant in 1963 and enquiries from interested British and Canadian visitors, together with his own passionate interest in militaria, led him to purchase one of the Batterie Todt casemates in 1970. His idea was to use it to set up an Atlantic Wall museum using his extensive personal collection but much work had to be done before the museum was ready to be opened to the public. The interior of the casemate was flooded under twelve feet of water and it took a year to clear out the tons of rubble and sludge. Thereafter, a pump was installed together with drainage to keep the interior dry. The museum opened in 1971 after the local mayor, police and fire brigade had inspected the casemate and pronounced that they were satisfied with the work that had been done. Since then the interior has been painted (although original German signs have been retained) and the collection improved with acquisitions and items donated by visitors. One 380mm shell case was found intact when the interior was pumped out and M. Davies has even defused a live shell of the same calibre found nearby and put it on show!

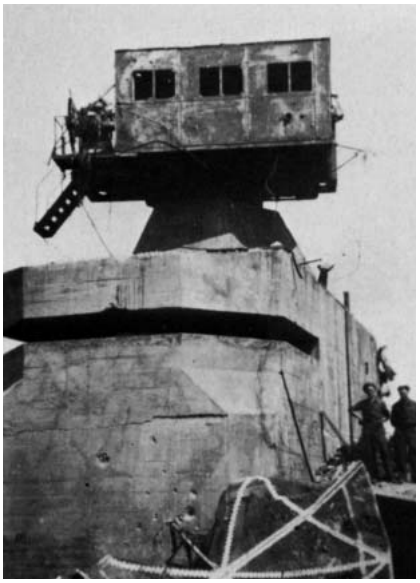
David Davies has spent a small fortune setting up the museum but has been increasingly discouraged by the efforts of a few jealous collectors to steal items on display. He had five burglaries in 1978 alone losing

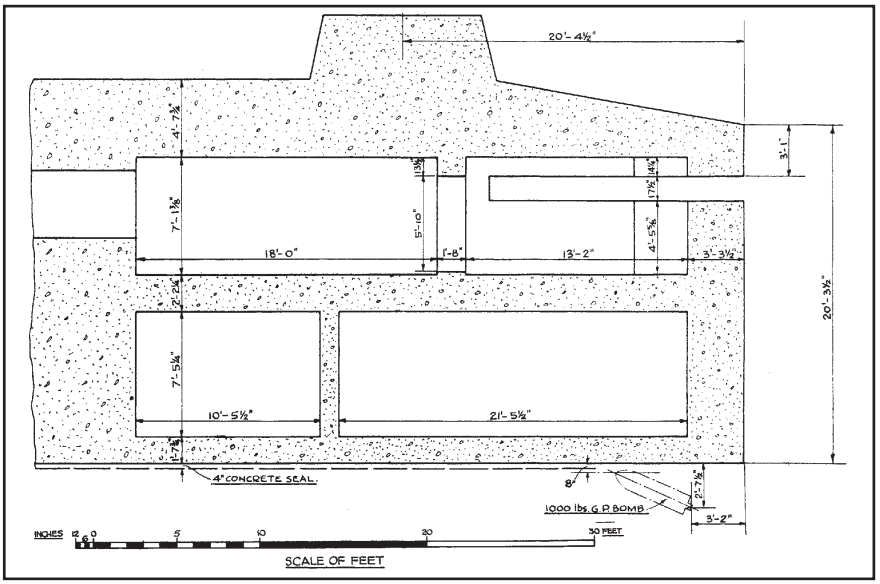


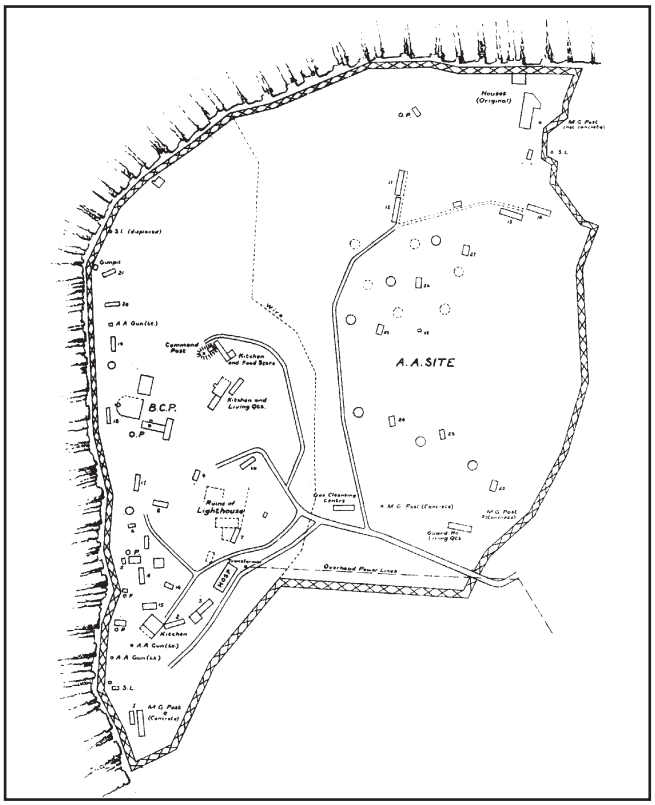
This layout of the Grosser Kurfurst casemates is based on No. 2 Gun. Each emplacement could hold about 210 shells and 250 full charge cartridges. Two magazines close by each held another 80 complete rounds while two reserve magazines, outside the battery area, stored a further 300 rounds. The guns themselves were of a quick-firing type with the rear half of the charge in a brass cartridge case about three feet long weighing 143lbs. The fore charge weighed 75lbs and came in a cloth bag. Several different kinds of shell were found in the magazines, the normal HE type being 4ft 2in long and weighing 625lbs.

The end of the Great Elector. August 1946 and the RE Bomb Disposal Group prepare to demolish the site by exploding the unused ammunition *(left). Above right:* No. 4 gun as it was and *below* being examined by Corporal Devine after the big bang.

No. 4 gun position as it can be seen today. Although the majority of the land on which the Framzelle battery was situated has been reclaimed for farming, as our aerial photograph on page 45 shows, thick undergrowth has been allowed to grow up around each casemate. This makes examination very difficult and comparison photography even worse.







The Battery Command Post for Grosser Kurfurst is situated a few yards from the cliff edge at Cap Gris-Nez itself. Beside it was the battery's two-storey observation post *(above)* with a Wurzburg radar aerial on its roof. It was surrounded by overlapping bomb craters and one small bomb had exposed the floor of the forward part of the building underneath the OP. An American 1,000lb bomb had entered this crater and lodged without exploding with its nose in contact with the floor (see drawing). It gave the engineers a ready-made opportunity to test their theories as there had been much discussion on the probabilities of buildings being undermined by this kind of occurence due to the J-shaped path usually taken by bombs in the ground. Without being moved, after the crater had been filled in to normal ground level, the bomb was detonated. The result was the complete demolition of the forward part of the OP even cracking the overhead cantilever canopy *(below)*. The identifyable rubble from the post can still be seen today on the right in the *bottom* photo. In December 1979 a radar mast was sited on the roof of the German BCP — a new Channel surveillance in keeping with its former use.

£8,000-worth of exhibits. After the seventeenth break-in, M. Davies decided to install a sophisticated alarm system with a siren which can be heard for miles. He feels particularly sore against the authorities who offer little support to what is both a tourist attraction and a way of preserving something which will, in hundreds of years time, be an important historical site.

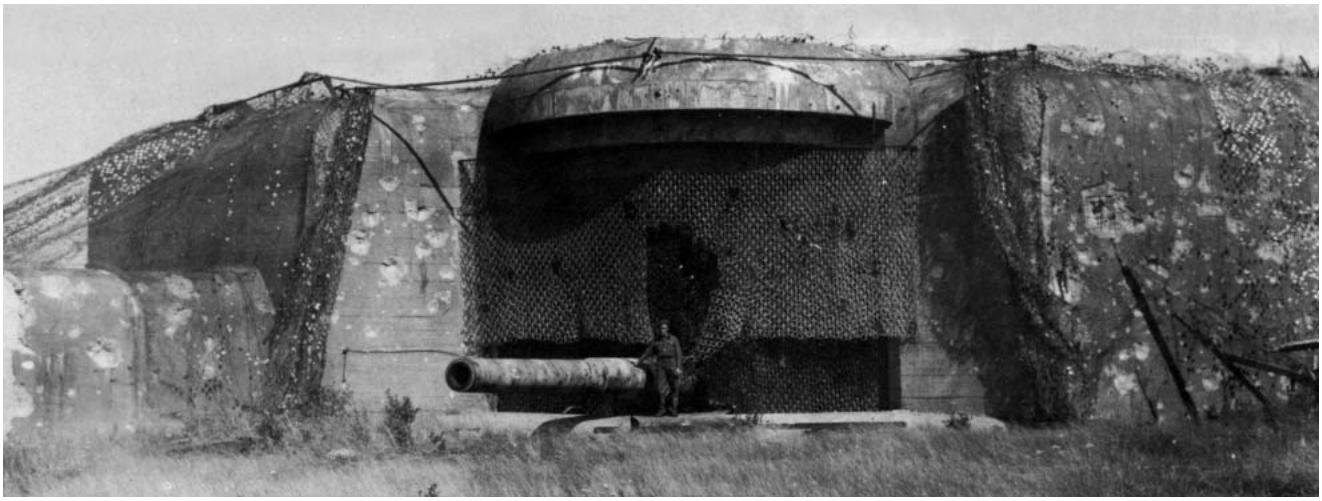
The other casemates of Batterie Todt are all privately owned but can easily be visited. Two are largely intact but the third has been split apart by a huge explosion. One must remember that in 1944, with a plethora of all kinds of small arms and ammunition lying around, familiarity bred contempt for what we would now regard as highly dangerous games. It seems that exploring blockhouses was as popular then as it is now except that two French road-menders used sticks of cordite from the huge cartridge cases to light the way. A spark must have been dropped and the resulting explosion literally as well as figuratively blew the lid off. A Canadian soldier found one man, minus his legs, lying dead in the wood across the road but no trace was ever found of the second man.

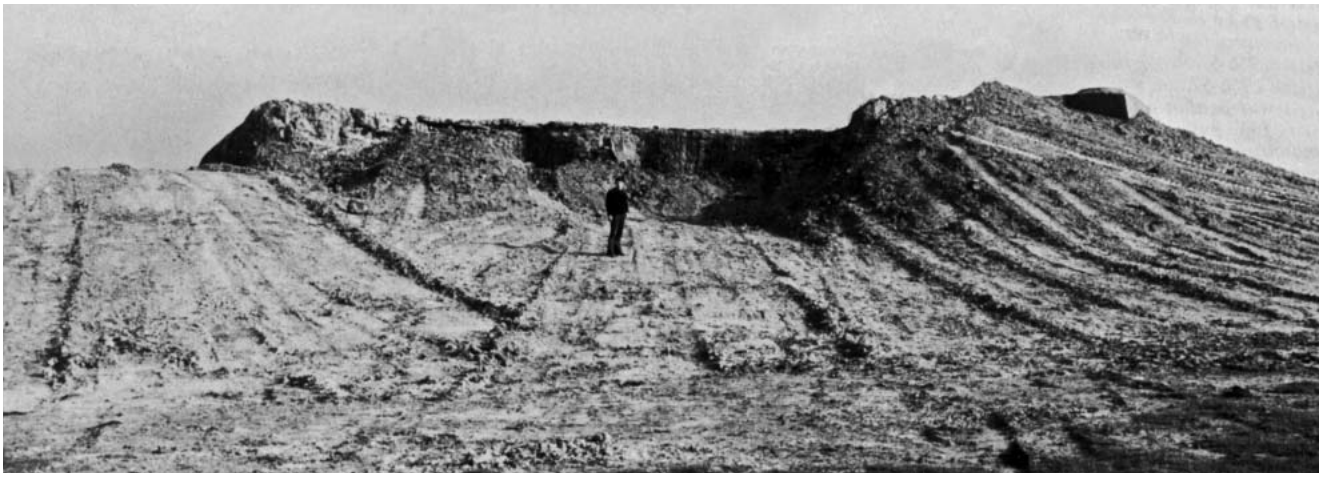
The fourth site we visited on our tour was that of the three 305mm guns of Batterie Friedrich August at La Tresorerie just north of Wimille. Unfortunately only part of one casemate survives, one has been completely demolished to erect a factory and a few unrecognisable lumps of concrete are all that remain of the third.

Whereas there is so much to see in France, a visit to the British Channel gun sites is disappointing. All the special railway track was lifted after the war, some like that at Winnie unofficially by scrap metal men who later found themselves in dock for theft!

On our own tour we were fortunate to have John Guy, Secretary of the Dover branch of

The last big gun site we visited in France was the 305mm, three-gun Batterie Friedrich August near the village of La Tresorerie, near Wimille, about three miles north of Boulogne on the N1. The battery was sited on a hillside and, being further down the coast, the range to Dover was 27½ miles (Lindemann to Dover slightly over 22 miles). The attack to capture the battery was begun by the 8th Canadian Infantry Brigade on September 17 as part of the battle for Boulogne. The unit was assisted by Crabs from C Squadron, 1 Lothians and Border Yeomanry; Crocodiles from 141 RAC and AVREs from 81 Assault Squadron, RE. It is a disappointing site to visit as one casemate has been completely demolished to make way for factory construction; the one *above* has been blown up while that *below* is being covered with spoil (Public Archives of Canada).





Left: **David Davies' Atlantic Wall Museum at Batterie Todt. Outside the entrance are two 380mm shells found by M. Davies and defused by him.** *Above:* **A young enthusiast with one of the battery's brass cases pictured outside the Hotel Normandie in Wissant.**

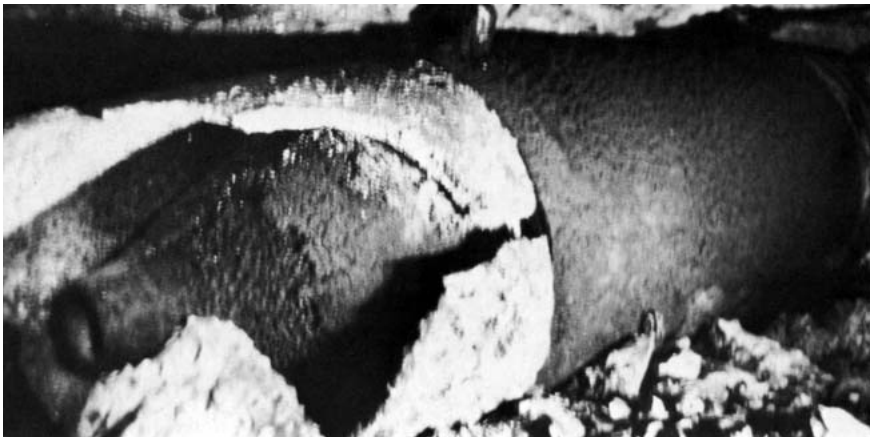
the Kent Defence Research Group and Dave Collyer, a fellow member, as our guides. We first visited the overgrown dummy gun site for Pooh quite close to Hog's Bush before moving to the Pooh site itself. Only the tops of two of the underground magazines remain in the field to mark the course of the railway; the line itself has been completely obliterated. However, the plotting room behind the gun is still intact and it provided an interesting comparison to that at Winnie which has been completely blasted from the ground. At the latter site, only a few lumps of concrete remain to mark this once world-famous gun visited by so many personalities during the war years. According to the tenant who now farms this part of the old golf course, the gun itself was dismantled soon after the war.

Although Winnie and Pooh (and the railway monster Bochebuster) received most of the press publicity at the time, it was South Foreland and Wanstone Batteries that did much of the cross-Channel damage. The four concrete gun pits at South Foreland are virtually completely overgrown so that without the guidance of John Guy, who has made a detailed study of the battery, we would have missed much of what there is still to see. The fire control bunker still stands and a convenient hole in the bricked up entrance enables an inspection to be made of the gutted interior. Large generator bunkers are the most prominent buildings on the headland but deep beneath one's feet lies underground accommodation for 1,000 men. Two of the entrances are still accessible and, providing one is equipped with a good torch, the interiors can be explored. (Several of us went down and it should not be necessary for the editor to point out the folly of exploring such places alone.) The tunnels must have been occupied by the very last National Servicemen as there are many scrawled inscriptions on the walls dated 1956-57.

It was at that time, March 1957, that the last big guns were removed from their mountings following the disbandment of the coast defences of Britain on December 31, 1956. The dubious honour of being the last out fell on Clem and Jane at Wanstone and the firm of Bird's Commercial Motors were called in to cut them up. Although all the metalwork has now disappeared, Wanstone, to the editor's way of thinking, remains the most interesting site and, with its huge reinforced ammunition bunkers, is the nearest thing we have to compare with the Cap Gris-Nez remains. The site lies on private land and permission for a visit should be sought from Wanstone Farm.

Langdon Battery which had 9.2-inch guns emplaced in the First War, had three 6-inch in

Relics of the battle of the Channel guns. *Left:* **American bomb fin from the concentrated bombing of Lindemann Battery.** *Above right:* **Tail of a morter bomb caught in a blockhouse.** *Above:* **Tellermine from the Lindemann minefields.** *Below:* **The demolition work on the gun sites carried out by the Royal Engineers left a few surprises — often some shells failed to explode in the anticipated chain reaction.**



the Second. (The 9.2-inch guns were taken to Singapore or Hong Kong about 1928-30.) In the late 1970s, the battery was selected as a site for a new coastguard station and the lookout room and conference room were built onto, and the same shape as, two of the emplacements. It was intended to open up the magazines for archival storage but as the building work had reduced the ventilation, dampness began to set in. The new station was opened by Prince Charles on November 23, 1979.

The new Langdon coastguard station has taken over from that at St. Margaret's Bay which is now only used as a repeater station. It was at St. Margaret's, at a site now completely lost under new housing, that the 5.5-inch 'flashing' battery was sited. Its purpose was to fire at enemy shipping to cause a flash visible to the ships under attack. When the vessels had altered course, the big guns would then open fire on the new heading.

The only other important battery north of Dover, along the cliff top from Langdon, at Fan Bay has all been demolished and the emplacements filled in.

To the south of Dover, the three 9.2-inch emplacements of Citadel Battery still remain to be seen although there is only evidence of two of the guns being installed. The three 8-inch emplacements at Capel were only bulldozed over in April 1980 when each was opened up, caved in and then covered over again — this work being financed from the hard-pressed budget of the local 'protection of the environment' programme. At Lydden Spout, the three gun pits with concrete surrounds can be seen but all the OP positions have gone. It was at this battery that a tragic accident occurred when the guns were being cut up when the former captain of the gun bucking team chose to visit the site of No. 3 gun. As he walked into the emplacement, it collapsed on him and killed him in front of his family.

Hougham, which once mounted three 8-inch, has ironically been snuffed out by a recent development in the history of the Channel — the tunnel to France. As the entrance to a projected working lies almost directly below the site, it was a convenient dumping ground for the thousands of tons of spoil removed before the tunnelling was halted and two of the emplacements are now completely buried.

When the Canadians overran the German big gun batteries in 1944 and silenced at last the menace to the inhabitants of Dover, it was only fitting that an appropriate trophy should now repose in the town. This is the surrender flag which once flew over Batterie Todt and was presented to the Mayor of Dover. It can now be seen in the Dover museum.

Another memento from Batterie Lindemann has been erected on the sea front esplanade in front of the Dover Harbour Board offices. This was the painted 'score sheet' on a piece of armour-plating from Caesar's turret presented to the town by the Calais branch of the British Legion.

Below: **The victor's triumph. Section from Caesar's turret from Batterie Lindemann erected in 1954 on the esplanade of the town that was on the receiving end of so many of the rounds recorded — Dover. The town's museum also has the Nazi flag captured by the Canadians from the German Garrison Commander at Cap Gris-Nez and a white rag of surrender.**